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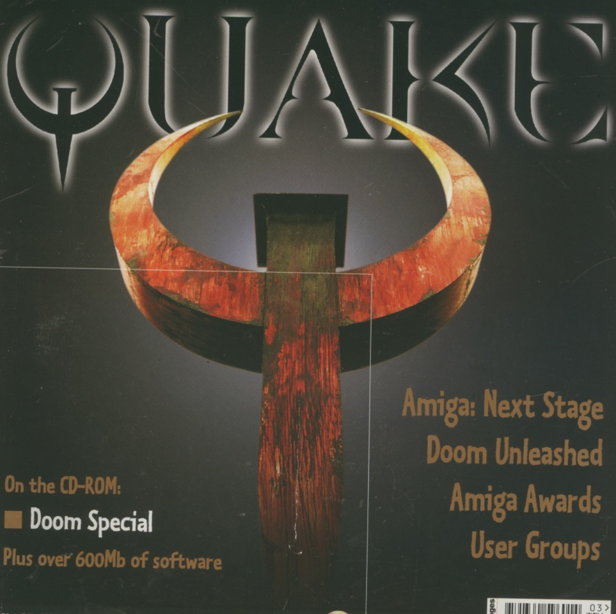

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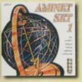
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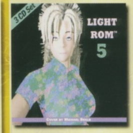

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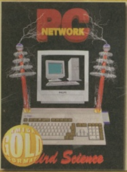

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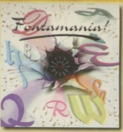
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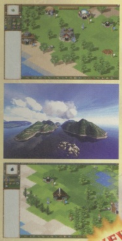

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COVER DISK AND CD-ROM DUPLICATION BY DISKXPRESS

ABC January-June 1997 27,391

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Editorial

It's a wonder we've got this issue out at all. Ever since we got the World's first playable version of ClickBOOM's Quake, the entire mag has threatened to grind to a halt. It's a game the like of which the Amiga has never seen before, and that's no exaggeration. We'll reserve judgement for the review of the 100% complete release version, but let's say early impressions are more than good!

Elsewhere on the scene there have been very interesting developments, not least of all the official announcement from Amiga Inc as to their plans for the future of the Amiga's CPU. Read on...

Tony Horgan, Editor

Feature

24 Amiga: Next Generation

Now that Amiga Inc have announced their plans for the future of the Amiga's CPU (see News for more on that one) we take a look at how things are likely to pan out, looking at hardware and software issues to try to get to the bottom of the most often asked questions. With the aid of a few 'unamed sources' we put two and two together and make four (or is it five?). You decide.

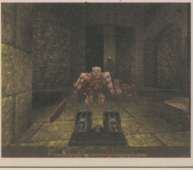
Feature

32 Stars of '97

It might seem like a long way off now, but 1997 was a good year from Amiga products. We take a look at the best, debate their qualities with a band of experts in order to come up with a list of award winning games, applications and hardware add-ons.

Feature

38 Quake



The best Amiga game we've seen in ages, possibly the best ever, is almost ready for release. Taking Amiga gaming to the next level, ClickBOOM's conversion of Quake looks set to roll over all previous pretenders to the 3D gaming throne in a single blast of its double barreled shot gun. More than just a single game, this will open up the Amiga to a whole new set of diverse 3D action adventures. Find out what all the fuss is about on page 38.

News

10 All the latest developments on the Amiga scene, plus Stateside.

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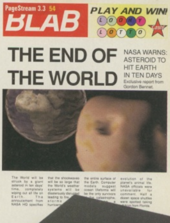

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THE END OF THE WORLD

NASA WARNS: ASTEROID TO HIT EARTH IN TEN DAYS
Exclusive report from Gordon Bennet.

The World will be struck by a giant asteroid in ten days' time, completely wiping out all life on Earth. The annoucement from NASA HQ specifies that the shockwaves will be so large that the World's weather systems will be disasterously disrupted leading to fire storms hurricane

the entire surface of the Earth. Computer models suggest ocean lifeforms will be the only survivors of the catastrophe, evolution of the planet's animal life. NASA officials were unavailable for comment. Half a dozen space shuttles were spotted taking off from from Florida.

Mobile Warfare 46

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Four score and five years ago, a large pig flew past th

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Cover disks

14 Super CD-ROM 20

There's more Doom stuff on the CD, along with all the best in new Amiga shareware as you've come to expect of CU Amiga CDs. Highlights include a full version of Cartoon Studio, two new virus checkers, a new AWeb 3.1 (including support for JAVA script) and a wide variety of games, mods, pictures, animations and demos to keep you amused until next month.

CU AMIGA MAGAZINE
Super CD-ROM 20

■ Amiga ■ CD32
See magazine for what's available and how to use the CD

March 1998 – packed with the best demos, graphics, mods, web sites, games and utilities for your Amiga, plus loads of Doom stuff.

CU Amiga Magazine Super CD-ROM 20 ©EMAP Images 1998.

18 Doom

We've gone to town this month with a three-disk extravaganza in order to bring you a playable demo of Doom, the shoot 'em up that kick-started the whole 3D revolution.

This is not an officially endorsed id Software product.

AMIGA
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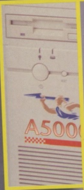

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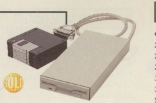

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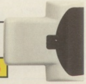

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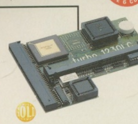

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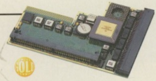

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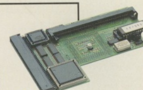

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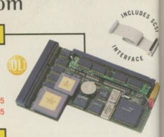

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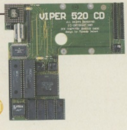

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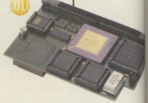

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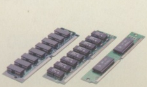

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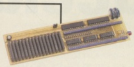

A600 1MB CHIP RAM

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- Fits into the trapdoor on your Amiga 600
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- Works with all A600 and A600HD

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- Factory installed 2MByte RAM
- Auto-Recharge Battery Real-time clock
- Fully auto-configuring RAM
- Works with all A500's WB1.3 and above

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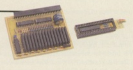

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- MByte 32-bit Zero Wait State Fast-RAM
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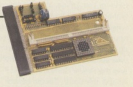

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- Inc. 1MByte Chip RAM
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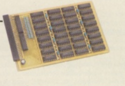

A1200 4MB RAM CARD

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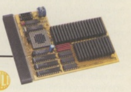

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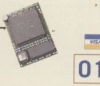
1MB CHIP RAM	£99.95



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News

Next CPU Decided!

On February 1st Amiga Inc., made public their decision on the vital question of the next CPU for the Amiga, and the answer is that there will be two of them. In what amounts to an official stamp of approval for the PowerPC boards currently marketed by phase5 as well as those planned for the BoXeR and the Power Computing/DCE A5000, the South Dakota based development wing announced that the immediate future for the Amiga lies in multiprocessing 680x0 / PPC solutions.

The decision will undoubtedly raise controversy, as some people will consider a dual processor solution to be inelegant, but this was the only way to solve the problems of backwards compatibility. Going over fully to another CPU would necessitate the porting of the OS over to that platform as well as the writing of code emulation to support the current software base, an expensive project which would hold up the release of next generation machines for up to two years.

The announcement will be exactly what many software companies have been waiting for. Development for the PPC has been held up by the concern that AI would jump to another CPU leaving companies with wasted development time they cannot afford. With this announcement, we hope to see Amiga software companies backing PPC development as quickly as possible. This will also be heartening news to those companies who have already taken the plunge and started development.

Which CPU will be the processor in future Amigas?

01-18-98 by Joe Torre

One man's answers to common questions about the choice of processors in future Amiga computers.

Q. Which CPU is more in the Amiga's future, 68K or PPC?
A. Both of them. Amiga has the 68K for legacy compatibility, the PPC for speed. The flexibility of the Amiga architecture has allowed it to gain a PPC chip(s) for computationally intensive tasks like rendering, (de)compression, (de)encryption, etc. The 68K provides 100% software compatibility, while the PPC provides the horsepower. As more of us upgrade to 68K+PPC we will have more and more software for our Amigas that harness the capabilities of PPC.

Q. Will a PPC accelerator be required to run Workbench3.5?
A. Definitely not. The OS upgrade is for existing machines as well as future ones. We wish to maximize the value and appeal of WB3.5, so all users will upgrade upon release.

Q. Since a native PPC version of WB3.5 would be faster than a 68K version, why is it being written for 68K only?
A. To support the existing Amiga Community. Whatever CPU AmigaDos was ported to it would run faster if the CPU was faster. The time it takes to market is an important consideration. The time it takes to add an Accelerator board is under 20 minutes, but Porting the OS to PPC would take a year plus. The WB3.5 upgrade is for the hundreds of thousands of 680x0 machines in use today, with or without PPC co-processors. More Amiga users benefit from a 68K upgrade sooner, than a PPC upgrade later, to hardware they don't own.

Q. Will there be a PPC only version of AmigaDos?
A. Third party AmigaDos Licences are free to port to Alpha, PPC, MIPS etc.
These CPUs may be ideal for embedded (non-Amiga) applications that AmigaDos excels at.
While these ports will no-doubt be fast, especially compared to the bloated OS's that usually run on such hardware. Although they can't be considered to be Amiga compatible unless they provide some sort of Chipset and 68K emulation.

Q. What about The Motorola ColdFire family as a CPU?
A. The ColdFire is less than %30 code compatible with 68K, and low in price, high in performance. The ColdFire has a reduced set of instructions, which make it very fast, but it lacks many of the bitfield operations that are critical to AmigaDos. Using ColdFire would require a complete rewrite of AmigaDos, and would be incompatible with the existing commercial programs, and all of the great Aminet archive.

Q. Will Amiga Inc. be making new Amigas?
A. No, Amiga, Inc. will not be making new machines. New machines will come from companies who have a licence from Amiga International. Petro has been very successful licencing the Amiga Technology. Check the Amiga International web page at http://www.amiga.de for the long list of licencees. Look to those companies for the New Amiga models. These companies brought to the Amiga refinements like RTG, AHI, PPC, Wide SCSI, and even PCI! These companies need your feed back as to what kind of features you prefer in a new Amiga model. They will only produce the kinds of Amiga's you want to buy.

PowerPC
MOTOROLA

▲ The face of the future for Amiga computing. 68K gets a new partner in the form of the PowerPC chip from Motorola.

To answer the inevitable flood of questions before they are asked, Amiga Inc. senior hardware engineer Joe Torre prepared the following statement.
There are of course still numerous questions left to answer. As we pointed out in our Next CPU article last issue, the ball is now in AI's court to settle the issue of Haage & Partner's WarpOS versus phase 5's own ppc.library solution for the software control of the multiprocessing functions, and this will no doubt be determined by the OS team. It is also interesting to notice that although AI throw open the possibility of a PPC port to third parties, they have not actually precluded the

Project Alpha Unveiled

possibility of doing it themselves in the future. HiQ Ltd. have made getting started with the Siamese System easier than ever. They've also made the future of Siamese more exciting than ever.

Presently, with the release of Siamese 2.5 RTG, you can now buy a one-stop bundle which consists of the Siamese software, a PCI Ethernet card for the PC and a PCMCIA Ethernet card for the A1200 (both CNet brand), as well as all the cables you'll need to get hooked up for £199.95 (VAT included). HiQ are also promising an AHI sound driver for PC audio hardware in the near future.

But this is nothing compared to HiQ's manifesto for the next 18 months of Amiga computing Siamese style, which they have dubbed Project Alpha. HiQ have long been fans of the Digital Equipment Corp Alpha CPU, which runs fast and hot but consistently pushes the performance envelope for computer performance.

Through Project Alpha, HiQ mean to allow a migration of Amiga users to the Alpha chip without losing compatibility while opening up Amiga applications to the superior performance an Alpha can provide.

Project Alpha is broken down into six steps. As HiQ sees it, they've already completed the first step, as Siamese RTG 2.5 runs on Windows NT-based Alpha machines. So, if you choose, you can link your Amiga to an Alpha workstation today.

Step two is more of a marketing penetration move than anything. HiQ hopes to expand the visibility and permeation of the Siamese Alpha system by offering Access Amiga clones from Index which would fit in a drive bay of an Alpha workstation, or the Index Boxer clone to house hardware such as the Video Toaster.

They also mean to push Amiga Forever on unsuspecting Alpha users with Amiga leanings in their hearts, to try to bring them back into the fold.

Step three takes the plunge many have expected for years now: linking an Alpha computer with an Amiga-on-a-card. Index's InsideOut Amiga clone, which fits an entire 040/060 based AGA Amiga on a single compact PCI card, will be sold and integrated through Siamese V3 software.

The potential speed gains of going from Ethernet to the PCI bus connection for communication between the Alpha and the Amiga are staggering. HiQ plans support for all of the PC's major I/O ports, as well as support for a wide variety of PC audio and video cards. The Inside Out will also provide a bonafide Amiga video slot,

Windows NT
AMIGA
Workbench
RTG

allowing a Video Toaster to be hooked up to the Alpha system.

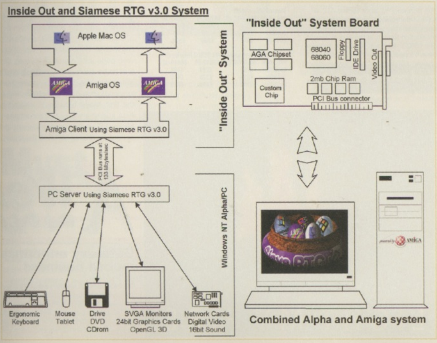
The potential for combining the Amiga Toaster and Alpha Lightwave in one box has eluded even Newtek. Stages 4 through 6 involve the actual porting of the AmigaOS to Alpha itself. Sound impossible? HiQ are said to be seeking the assistance of some major players in the computing world at large. When ready, the Alpha-based AmigaOS will continue to call on the InsideOut for ECS/AGA necessities unless a suitable emulation can be developed or implemented in time.

Reality Check

Is this possible? Anything is possible, as they say. It does not seem unlikely that the AmigaOS could be moved to the Alpha chip, albeit slowly as despite years of good intentions the OS has not yet been made ready for mass porting – it was quite a task for Amiga Technologies just to get the source code to compile again. The new Amiga Inc. has had its hands full just getting operational, so they have not had teams of crack engineers working around the clock on the problem. But HiQ have shown what the efforts of just a few individuals (notably Paul Nolan, inventor of Siamese, and Mick Tinker, the man behind the Index Amiga clones) can accomplish.

What about Amiga Inc? They have their own plans for the Amiga's future direction, and have not yet publicly commented on Project Alpha. HiQ appraised the South Dakota squad about their intentions months ago, and Darreck Lisle of Amiga, Inc told CU that the company was committed to supporting HiQ's efforts, but the exact level of that support was still to be determined. There's a sticky issue of source code licencing to be conquered if an Alpha port is to be done. Lisle was not prepared to elaborate on how that problem would be solved, since Amiga Inc. has been reluctant to issue source code licences.

At its high price point, the Alpha is not likely to be the final port of call for all Amiga users. Project Alpha is geared towards those looking to strap their Amigas, and ultimately the AmigaOS, to the fastest hardware on the market.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Amiga OS
AMIGA
Amiga Client Using Siamese RTG v3.0
PCI Bus runs at 133 Mbytes/sec
PC Server Using Siamese RTG v3.0
"Inside Out" System
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News in Brief

Bad day for Bill

On the same day that Netscape acted to halt the rise of the Microsoft challenge to their Web browser dominance by stating that Netscape 5.0 would be freeware (see story elsewhere), Microsoft suffered a serious setback in the US courts. Microsoft have agreed to comply with a 1995 court ruling by immediately offering for vendors versions of Windows 95 which do not come with their own Internet Explorer web browser. Anti trustee lawyers in the US had accused Microsoft of trying to destroy fair competition by forcing vendors to ship their own browser with up to date versions of their market leading OS. A separate Department of Justice Anti - trust case continues.

Microsoft to buy BT?

Shares of BT and Microsoft rose on world stock exchanges on the 22nd of January as rumours spread that Microsoft was mounting a hostile takeover bid for BT. Microsoft are known to be interested in spreading their influence over the whole of the media and communications world, and a combination of Microsoft and BT would make a communications and technology giant of unrivalled influence. Commentators suggested that the size of BT was too much even for Microsoft and some kind of partnership deal was more likely. Speculation that UK telephones would drop the traditional number pad in exchange for a Windows CE front end requiring an LCD screen and an 8 MB ROM is probably untrue.

Bird artist

Anyone interested in the rather excellent Lightwave model of a bird shown in the review of LightROM 5 in our November issue can contact the artist James Curtis of JMC graphics by e-mailing him at jmcgfx@ncweb.com.

Aminet returns!

January saw near panic on the internet as rumours flew that the Aminet had suffered terminal collapse. After several days with no updates, worried Amiga users around the world were contacting administrator Urban Mueller to find out what was going on. The collapse was said to be due to the loss of the RAID storage system at Washington university which hosts Aminet, blamed on human error. A tape backup of the entire Aminet should have the world's largest file collection back up and running before you read this.

300,000 Amigas

Regent Electronics Corp., the subsidiary of Lotus Pacific Inc. set up to market the WonderTV A6000 Amiga based multimedia set top box, have filed their latest quarterly fiscal report with the US securities and exchange commission. According to the report, marketing started during the last quarter of 1997. Shanghai Dingqui International trading company have agreed to purchase the chips and parts to assemble machines in China on the basis of a purchase of 300,000 units by the end of 1998 at $86 dollars per set. Where REC are going to source 300,000 AGA chipsets over the coming year are unclear.

Netscape goes free

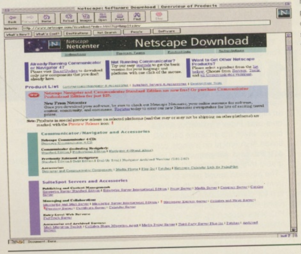
In a surprise move, Netscape Inc. has announced that it's standard edition browser will be released as freeware, as will the full source of soon to be released Netscape Communicator 5.0 for use in what the company has described as "easy" licence terms.

Netscape's move is a direct effort to bolster the popularity of their web browser in the face of increasingly intense competition from Microsoft's Internet Explorer, which has been the subject of a great deal of controversy. Microsoft has just been accused of forcing PC manufacturers to include Explorer on the desktops of every machine they sell with Windows95, an act which directly impacts on Netscape's market penetration. Through free licencing, the company hopes to expand the scope of Netscape usage across the PC and Mac worlds, as well as to new platforms such as th Amiga.

As an ever-smaller share of Netscape's rev enues have come from client sales, so the mo logical as most PC and Mac users download Netscape free of charge from the company. CU contacted Netscape spokesman Martin Ca for comment. "An Amiga port of Netscape wo be very cool." Cagan went on to note that ma Netscape's engineers are Amiga aficionados. Netscape's license agreement will allow Amig ports of the code to be widely distributed, bu company requires that the resulting modified source code be sent to them to add to the co tive pool.

A port of Netscape will not immediately g Amiga users access to all that the Web has to since a number of plugins such as RealAudio Shockwave, and others are still held by their respective owners. But Cagan was hopeful th many of these companies will follow Netscap example and make their source code freely a able as well.

This represents an interesting challenge f as a port of Netscape would be a very good i tor of the seriousness of the platform and ma be worth them backing to ensure it takes pla Within hours of the announcement CU had a heard of one Amiga programmer interested i doing the job, but the task is not a spare tim effort, and porting would take some time.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Document: Done

BlizzardPPC restructured

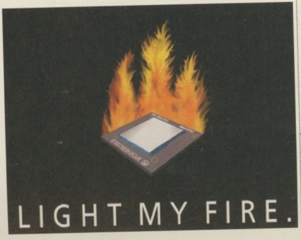
The Blizzard PPC cards for the A1200 have undergone another change in product line as they were being finalised for production to start at the end of January. The 68030 version of the board has now been dropped due to the availability of cheaper 68040 parts, and the boards will now come in two version, with or without SCSI 2 and with a combination of CPUs. The latest recommended pricing from phase 5 is as follows:

Blizzard 603e boards

PPC 603e	68LC040-25	68040-25	68060-50
166MHz	£219	£239	£449
200MHz	£269	£289	£499
250MHz	£349	£369	£579

Blizzard 603e+ boards (with SCSI 2 interface)

PPC 603e	68LC040-25	68040-25	68060-50
166MHz	£269	£289	£499
200MHz	£319	£339	£449
250MHz	£399	£419	£629


LIGHT MY FIRE.

A-WEB gets JavaScript

The latest version of Yvon Rozijn's A-W browser, A-Web II 3.1, has grown a nu of new features, including support for JavaScript. Used for a number of com web page automation processes, Java (not to be confused with the full Java gramming language) has become pop amongst web page designers, and A- the first Amiga browser to support it. Also added are secure connections w Miami SSL, an internal mailer and nev er, and enhanced HTML 4.0 support.

Gateway announce record business

After announcing sizeable 3rd quarter loss Gateway 2000 have bounced back to a rec formance in the 4th. With shipments up 3 4Q 1996 and revenue up 28% from the sa od, Gateway's claim that the previous loss due to one off expenditures has been vind

Stateside News

by Jason Compton: Editor in Chief of Amiga Report Magazine

Expo Watch

For those of you headed overseas who might want to hook up with some of your Amiga cousins, you'll have a couple of opportunities in upcoming months.

The St. Louis Amiga 98 show is slated for March 13-15. St. Louis last year had the misfortune of being scheduled just days before Gateway 2000 announced its Amiga purchase – perhaps this year we'll get lucky and have some good news to take as momentum into the expo weekend. Both Petro and Jeff Schindler are listed as VIP guests. For venue and ticket information, check out **www.amiga-stl.com/show.html**, or write and enclose a SAE to: Amigan St. Louis PO Box 672 Bridgeton, MO 63044 USA

If you're fortunate enough to visit Canada, Randomize will be hosting the International Amiga '98 conference in Toronto, Ontario on May 29 and 30. Among others, powerhouse phase5 and tower-masters Micronik are announced as attendees. For more information, check out **www.randomize.com/ia98.html**, or write Randomize RR #2 Tottenham Ontario Canada L0G 1W0

International
AMIGA®
98

GVP
welcome to gvp-m online

Disappear-Reappear

Two of North America's few Amiga hardware manufacturers have been a bit difficult for customers to reach – a situation which hopefully will sort itself out soon.

GVP-M, the GVP successor company, went silent in the month of December, just as it was to have new manufactured products ready for market. According to their updated website (www.gvp-m.com), the company has moved and is ready to ship a variety of GVP classic products, including the TBC+, GLock, and accelerators from 030 to 060 models.

On numerous occasions, GVP-M director Michael Wojciechowski has told me of plans to restart manufacture of the GVP Spectrum 24-bit video card and re-introduce it to the market at a very aggressive price – the Spectrum would be an excellent value as it is CyberGraphX compatible, has a monitor switcher, and is reasonably fast. I hope his plans come through soon.

DKB, perhaps the longest operating third-party Amiga manufacturer, is also in the process of moving. Rumours began to circulate that the company had shut down, but industry sources indicate that the company is scaling back its operations and that marketing of DKB products may be outsourced

Correction

Our games section last month suffered from some design errors. Our apologies to the teams behind Trauma Zero, Olofighter and Puzzle heroes for the screenshot problems in the Game Italia feature, they are reproduced in this month's coming attractions feature properly.

The review of Myst got the wrong scorebox too, so here is the original scorebox and a precis of the original review from Jason Compton.

Myst

Publisher: PXL Developer: ClickBOOM/Cyan

It's great.

Myst

- Workbench version.........3.0
- Number of disks..............CD
- RAM..............................8Mb
- Hard disk installable......Yes

Graphics 97%
Sound 94%
Lastability............................ 92%
Playability............................ 90%

OVERALL

As the box says, Myst will become your world.

93%

AMIGA SUPERSTAR

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CD-ROM

Super CD-ROM 20

DOOM SHAREWARE VERSION!
DOOM SPECIAL
The game that started it all makes its way to your Amiga - play the real thing at last!
Plus:
Cartoon Studio
Phone Wizard
New Virus Checkers
PowerPC tools
Utilities
Graphics
Modules
Web sites
Animations
PLUS
New Hippoplayer and Digibooster
NetPBM
AmIRC
Amiga Forever update
Readers bits

Welcome to CUCD20. This CD is crammed full of programs, games, utilities, mods and a host of other goodies. If you don't yet have a CD drive, this is your reason to buy one. Prices have never been lower and 650Mb of quality software each month is just too good to miss.

How much of what?

It's easy to miss where the real contents of a CUCD lies so here's a list of how much data lies in each directory. Headlining the CD is Scala MM300 (see page 18 for a walk-through guide). Aside from that there's more than enough to keep anyone going for the next month, whether it's graphics, offline web browsing, music, programming, games, or simply tinkering with the many and varied utilities and tools to be found on the disc.

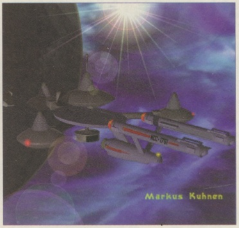
● Scala MM300	21Mb
● OpenBSD	54Mb
● CDsupport	63Mb
● System files	13Mb
● CD-ROM	12Mb
● Demos	13Mb
● Games	45Mb
● Graphics	38Mb
● Magazine	28Mb
● Online	114Mb
● Programming	72Mb
● Readers	32Mb
● Sound	32Mb
● Utilities	9Mb
● WWW	56Mb

Making the most of CUCD20

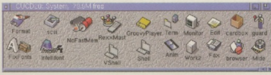
All CUCDs are designed to be used whether you boot from the CD or your normal Workbench. If you boot from the CD, everything is setup and ready to go. If you want to access the CD from your Workbench, you should first run InitCD. This sets up various assigns and paths needed by programs on the CD, so if you don't do it, things won't work. It doesn't make any changes to your system, or write any files to your hard drive, all changes are temporary and can be reversed by running InitCD again.

Your own custom CD

In the past you had to use whatever file viewers we set up on the CD. since these had to work with all Amigas they were quite limited. From CUCD12 we decided to allow you to specify how the CD should work on your Amiga and included CDPrefs in the CDSupport drawer. If you have never run this before you should be asked if you want to when you run InitCD. CDPrefs lets you specify which program you want to use to handle each type of file, graphics card users can view pictures in full 24 bit colour, ProjectXG users can listen to midi files through their midi card and people with sound cards can listen to mods with an AHI module player. It also means we were able to provide different defaults for Workbench 2.x users. Once you have run CDPrefs, your setting will be saved to your hard drive and will be used every time you use this CD or any other CUCD.


Markus Kuhnen

Some people had problems with the original use of IDer, partly through a lack of understanding of how it worked and partly through a lack of explanation from us. All icons now use CUCDfile as their default tool, and the previous IDer problems should be a thing of the past. If you do have any problems, make sure you have run InitCD.


CUCD20: System, 79.9M free
Format
scsi
NoFastMem
RexxMast
GroovyPlayer
Term
Monitor
Edit
cardbox
guard
FixFonts
Intellifont
VShell
Shell
Anim
Work2
Fax
browser
Mide

Highlights of this month's CD

'Canyon' is just one of the impressive animations that can be played direct from this month's cover CD.

Doom

is the main highlight, but in between blowing the bad guys to pieces, here are some other highlight to check out.

Graphics/NetPBM

This is a suite of powerful image manipulation and conversion programs. Being based on a Unix package means it's shell based, but don't let that put you off as there are also a couple of GUI programs included. If you need to convert and/or process a number of files, such as frames grabbed from video, or output of a 3D render, this is well worth looking at.

Graphics/CartoonStudio

CartoonStudio, and it's successor AnimatED, show just what the Amiga is good at in the graphics filed. Animations with synchronised sounds etc. are so easy to create.

Online/AmIRC

Most dedicated Netheads should already have this, but for those new to the Net or IRC, here is a major update to the definitive IRC program, not only on the Amiga but any platform.

Sound/ DigiBoosterPRO

This is a highly specified tracker program, handling a wide range of formats. If you create something good with this, don't keep it to yourself but send it to us.

Sound/MusicBugs

This creates "music" based on whatever you draw on the screen. you'll either love it or hate it, so try it.

Utilities/Case

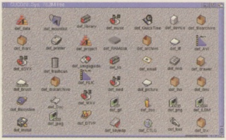
This is one of those little CLI utilities that you find you can't do without it once you've used it. It scans a directory, renaming all files that match a specified pattern. It will remove spaces from filenames, convert all names to upper or lower case and several other options.

Utilities/WordConverter

This one converts documents from MS-Word to a format that can be recognised by the Amiga. Actually, several formats, including AmigaGuide, HTML and direct import into PageStream3.

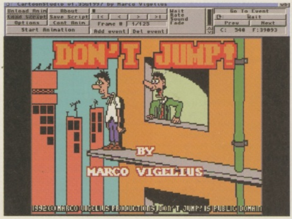
Utilities/VirusChecker_II

For years, VirusChecker was the de facto virus program, until the author stopped working on it and it became too out of date to be useful. Now development has been restarted by a new author and it's back.


def_data
def_mountlist
def_library
def_music
def_QuickTime
def_device
def_lharc
def_printer
def_project
def_RAMdisk
def_archive
def_AVI
def_8SVX
def_trashcan
def_amigaguide
def_lib
def_email
def_midi
def_drawer
def_brush
def_diskarchive
def_FLIC
def_med
def_picture
def_lha
def_dms
def_filesystem
def_Doc
def_WAV
def_gif
def_zoo
def_png
def_ILBM
def_install
def_jpeg
def_DTYP
def_keymap
def_CTLG
def_tool
def_lzx

You can never have too many icons, so with that in mind we've got another couple of icon collections on the CD to follow up the recent New Icons pack.

We've got the full Cartoon Studio for you this month, one of the best animation packages to have appeared recently, so get out your storyboards and start scribbling!


CartoonStudio v1.35©1997 by Marco Vigelius
Unload Anim
About
Load Script
Save Script
Options
Cont Anim
Start Animation
|<
<
>
>|
Frame #
1/125
Add event
Del event
Wait
Rate
Sound
Fade
Go To Event
Wait
Prev
Next
C: 540 F:39093
DON'T JUMP!
BY
MARCO VIGELIUS
1992©MARCO VIGELIUS PRODUCTIONS DON'T JUMP! IS PUBLIC DOMAIN

Making things work

Wherever possible, we have tried to make software work straight from the CD, this isn't always possible for a number of reasons. Some programs need to be installed to your hard drive to work, often requiring specific system files. These files are usually on the CD so running InitCD often helps here.

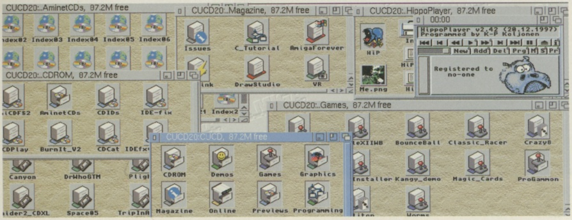
Most software contains a list of system requirements in the documentation, and some will not run unless you have the required processor, memory operating system version or chipset.

Some programs, particularly demos and games are written in an OS illegal way. This can mean they only work on specific machine specifications, sometimes the readme states this, but not always.

Many demos are intended to be run for a shell, the icons we add simply start them from a script. In some cases this will not work, especially with demos that need a lot of Chip RAM.

In this case you will need to boot without startup-sequence and run the program from the shell. Your Workbench manual should explain how to do this.

What's on this month's CU Amiga CD?


CUCD20:..AminetCDs, 87.2M free
Index02
Index03
Index04
Index05
Index06
CUCD20:..CDROM, 87.2M free
CDFS2
AminetCDs
CDIDs
IDE-fix
CDPlay
BurnIt_V2
CDCat
Canyon
DrWhoGTM
Rider2_CDXL
Space05
TripInA
CUCD20:..Magazine, 87.2M free
Issues
C_Tutorial
AmigaForever
DrawStudio
VR
Index2
CUCD20:..HippoPlayer, 87.2M free
00:00
HippoPlayer v2.42 (28.12.1997)
Programmed by K-P Koljonen
New
Add
Del
Prg
Registered to no-one
HiP
Me.png
CUCD20:..Games, 87.2M free
BattleXIIWB
BounceBall
Classic_Racer
Crazy8
Installer
Kangy_demo
Magic_Cards
ProGammon
Worms
CUCD20:CUCD, 87.2M free
CDROM
Demos
Games
Graphics
Magazine
Online
Previews
Programming

Doom: Since the public release of the Doom source code just before Christmas, Amiga coders have been porting Doom left, right and centre. This Doom special contains no less than five versions of Doom. some of them run straight from the CD, others need ixemul and/or rtgmaster installed first, these are also included on the CD. All versions run with the standard shareware Doom "WAD" file, containing game information, but there's a lot more. If you have the wad file from the commercial PC version of doom, available very cheaply now, you can use any of the many additional WAD files. We have included almost eighty of them on this CD, just to get you started.

There are a few other bits and pieces here too, such as the original source code, some FAQs (Frequently Asked questions) and a list of game cheats.

CDSupport: This contains various support files, such as mod players, anim players, GMPlay, MUI, ClassAct. Most importantly, this is where the CDPrefs program lives. With this you can customise your CUCD to launch your choice of program for each type of file.

Two other notable icons in here are Docs.guide, with links to all the program documentation files on the CD, and Index. Run Index, type in the name of a program, or part of it, and it will search the contents of the CD for you. you can either search the current CD or the index files of all CUCDs since number 4.

CUCD: The CUCD drawer contains most of the CD contents, here is a selection of what each drawer holds.

CDROM: We have a new versions of the audio CD player ACDPlay and a demo of the new BurnIt CD mastering software. CDcat is a powerful CD cataloguing program that handles all sorts of data and program CDs. There is also a useful guide on using the CD32 emulator in IDEfix to run CD32 games.

Demos: With 55MB of demos on this CD, there's no point in trying to describe them, go and see for yourself!

Games: As if Doom wasn't enough, there are more games here. Card players can get to grips with Soliton, Crazy 8 and Magic Cards. for more "out of this world" gameplay, try BattleXIIWB. If Amiga games aren't enough for you, we have the latest information on ShapeShifter compatible games too. And we couldn't have a CD without at least a few worms levels and samples.

Graphics: CartoonStudio was shareware, but it is now freely distributable and on the CD, together with the shareware AnimatED. There is also a selection of animations created with these programs, and we look forward to receiving lots of CD contributions from you. We also have a number of large anims, including Plight of the Artist by Eric Schwartz.

NetPBM is a flexible and powerful image conversion and manipulation package, particularly good for batch processing large numbers of images. NetPBM itself is shell based, but there are also a couple of GUI front ends included.

Magazine: Full source code for the C tutorials, more AIRLink codesets, a fix for the screenmode problem with DrawStudioLite and some updates forAmigaForever

Online: The news section has been extended. There are now separate sections for Usenet news, the CU Amiga mailing list and Fidonet. See what people were arguing about at the start of the year :)

Amiga Network News has now ceased, but here are the archives of all articles for the last year. If you fancy a bit of network gaming, have a look at Netris, and all webmasters should check out the new HTML 4.0 specification.

Readers: PowerPC is the main theme this month. We have a new freeware ANSI C compiler with PowerPC support. There is also a PowerPC update to SAS/C and the latest PowerPC libraries from Phase 5.

Programming: some 14Mb of contributions >from you. There are two football results programs, one for recording results and one for predicting them. We also have a number of utilities for use with MAXs BBS systems.

We have anims and mods here, although not as many as usual. This is your section of the CD, your opportunity for fame, if not fortune.

Sound: Mpeg audio continues to be popular, with two front end GUIs for MPEGA, we also have the first mpeg audio encoder for PowerPC. Both the HippoPlayer module player and DigiBooster tracker have been updated recently, get the latest version here. The modules section is as popular as ever, with some fifty mods in here.

Utilities: Where do I start? There are so many different utilities in here this month. Development of VirusChecker stopped a couple of years ago, but now it's back as VirusCheckerII. We have some filetypes and toolbar icons for Directory Opus, updated datatypes, a home banking program and information on system libraries, devices, datatypes and hard drives.

There's also the useful WordConverter, for converting PC and Mac Word documents to a format usable on the Amiga.

WWW: Another collection of WWW sites, together with a choice of browser to view them. Have a look at this sample of the sort of information that is available on the WWW, including the world famous CU Online site!

We also have an exclusive demo of the first Amiga browser to support JavaScript.

Eyetech's Spring Specials: EZ-Towers from £79.95!!!; 4-speed CDROM system - £99.95!!!; A1200 Magic Packs from - £199.95; MP with hard drive, accel & 8MB - £349.95; EZ-Tower Systems inc A1200 from £349.95; 030 accel's w/4MB from £79.95, w/8MB from £89.95; 19 Mips '040/25 £128.95; 39 Mips '060/50MHz £268.95; 20% off mem prices bought with an accel.; LS120 £99.95; (Price down, New Product)

Q. What fits in a floppy bay and reads & writes 120 MB PC & Amiga cartridges AND 720KB & 1.44 MB PC diskettes?

A.The All-New LS120 ATAPI drive from Eyetech

- 120MB backup and PC 1.44MB diskette compatibility in one unit
- Bare Drive just £99.95 .120MB cartridges just £14.95/1 or £34.95/3
- EZ-IDE universal EIDE driver software is required - 50% discount when ordered with the LS120 or 4-device buffered interface . Upgrades available from Eyetech-supplied IDE-fix available - see below right.

HEALTH WARNING *"A buffered IDE interface is essential to avoid overloading of the A1200's IDE port when adding extra devices"- John Kennedy - AF - July 1997*

Don't be tempted to skimp. Fit an Eyetech 4-way IDE/ATAPI 3-chip buffered expander to preserve your Amiga's Health. *The original and best* - Just £39.95. **Now with 50% discount off EZ-IDE software**

The Mk2 EZ-TOWER - from just £79.95

See our full-page EZ-Tower feature advert in this magazine

... Or buy a CDPlus unit (below) and get an EZ-Tower for just £79.95*
(*as an alternative to the regular CDPlus case)

The Top-Rated Eyetech *CDPlus* for the A1200

The CDPlus and SyQuest EZ135 drives. The IDE Zip Drive is the same size as the EZ135

- 8-, 16- or 24-speed external CDROM unit in quality, CE-approved case with heavy duty PSU
- Leaves trapdoor free for accelerators / memory expansion and the PCMCIA slot free for digitisers, modems, samplers etc
- Option to add additional HD's, CDRoms, LS120s, SyQuests, *IDE Zips*, Jazs, SyJets, ATAPI tape streamers etc powered from the CDPlus unit
- Comes with special Eyetech *'060-compatible* Mk2 4-device EIDE buffered interface board - easily fitted in minutes with no cutting/drilling (Note that IDE CDROMS *must never* be directly connected to the A1200 without a buffered interface - ask any qualified electronics engineer!)
- Gold plated audio phono sockets at rear (CD+ only) and front panel headphone socket and volume control

Amazing Value - Prices down again!

4-Speed - £99.95 see right
8-Speed - £148.95
16-Speed - £164.95
24-Speed - £179.95

Spring Special - limited availability
4-SPEED A1200 CDROM SYSTEM FOR JUST £99.95!

Includes 4-speed CDROM, metal case, 4-device buffered interface, power supply & CDROM power cable, 40-way and 44-way IDE cables and full instructions

Considering a PowerStation?

The CDPlus is now available with a, 230W, CE-approved, PC MiniTower* or Desktop* case (which can also power your A1200) - *for only £20 extra*
(*as an alternative to the regular CDPlus case)

Amiga User International - *97%* *"... It all worked faultlessly..."*
Amiga Format - *96%* *"... An absolutely superb bit of kit.."*
Amiga Shopper - *90%* *"... This is a quality product..."*

D-I-Y and Bargain Corner

Hard-to-find parts for your Amiga project

Hard , floppy drive cables and cases	
2.5"-2.5" 44-way 2.5" HD cables 9cm £8.95, 13cm £9.95, 60cm	£19.95
2.5" 3x44-way hard drive cables for 2 x 2.5" drives (6cm+6cm)	£12.95
3.5" power & data cables for A600 & A1200 £14.95; full fitting kit	£24.95
3.5" external hard drive case £19.95, 3.5" removable drive case	£24.95
3 x 40-way IDE cable for 3.5" HD/CDROM ~85cm/2' 9"	£9.95
Custom 3 x 40 IDE cables to 1.5m/5' (enclose drawing)	£19.95
2.5" hard drive to 3.5" bay with 3.5" data/power cable adapters	£11.95
3.5" floppy/SyQuest/Zip/HD drive to 5.25" bay mounting adapters	£6.95
40 pin m-f detachable data cable forexternal 3.5" HD/CDROM's	£9.95
Slimline external floppy/IDE SyQuest/IDE ZIP/IDE Jaz case	£6.95
SCSI cable 25way 'D'(m)to 50way Centronics (m) (1m)	£9.95
SCSI cable 50way Centronics (m) to 50way Centronics (m) (1m)	£9.95
2 x 34pin ribbon cable + faceplate for A1200 int'l floppy in tower	£12.95
23p-M to 23p-F external floppy ext'n cable 0.5m £12.95; 2m	£14.95
Audio & video cables and adapters	
3.5mm stereo jack plug to 2 x phono plugs for CDROM	£5.95
CDROM standard 4 pin inverted T audio connector & phono plugs	£9.95
Phono plug x 2 to phono plug/socket x 2 audio mixer leads	£6.95
Stereo 2 x phono plug to 2 x phono plug 1.1m/4' (4.8m/16' £9.95)	£4.95
Stereo speakers (pair), with amp (16wPMPO) & mains psu	£9.95
Power supplies, cables and PC towers//desktops with integral psus	
IDE or SCSI CDROM case, 40w PSU, audio & data connect's	£59.95
Mini-tower or desktop case with 200W/230W PSU, CD & HD/Zip bay, power lead connector block, resistor, cable restraint etc, & full instr'ns	£39.95
Genuine CD32 PSU £12.95; Genuine A1200 PSU	£14.95
4-pin M-F HD prw extn 0.9m/3' £9.95; 4-pin(m)->2x4-pin(f) splitter	£6.95
SuperSplitter 4-pin(m)->3x4-pin(f) (HD/CD) + 1xFDD/LS120 pwr	£11.95
23 pin m floppy drive connector to 4 pin HD/CDROM power plug	£9.95
Miscellaneous	
A1200 /SX32 internal cooling fan - dissipate that extra power!	£14.95
VGA 23-15 pin adapter(A500/600/1200) £12.95; buff'd for A4K	£19.95
A4000 kbds new w/ blank keycaps - fit your old A1200/4K ones	£39.95
50MHz capable PGA FPU	£39.95
PLCC chip removing tool for FPU's etc	£8.95
Genuine CD32 11-button joypad controllers	£12.95
Amiga CDROM disks - our selection - 5 for	£10.00
A1200/A600 internal floppy drives £24.95; A1200 keyboards	£24.95
Amiga microswitched mouse with mousemat	£6.95
ScanQuix3 PC printer cable adapter - parallel Epson scanner	£9.95
14.4Kb compact data/fax modems - last few -from	£19.95
A1200 Workbench 3.0 disks (5) £11.95; WB3.1 disks (6)	£14.95

Four new Amiga Expansion Products from Eyetech

PortPlus - high speed serial and parallel port expansion

- *2 x **460Kbaud** buffered serial ports with low CPU overhead*
- *PC & Amiga compatible parallel port transferring up to **500K bytes/sec***
- *Very easy to fit **& leaves PCMCIA & trapdoor free. Zorro versions too!***

PortPlus - 2x serial & 1 x parallel - *just £89.95!*
PortJnr - 1 high speed serial port - *just £44.95*
New! PortPlusZ3 - 2xP & 1xS - £69.95; PortPlusZ4 - 4xS - £89.95
PortXtra - adds extra 2xS & 1xP to PortPlusZ3/Z4 Zorro cards - £59.95

Apollo Accelerators - Unbeatable pricing

A600 - 33MHz '030 with MMU & FPU exp to 32MB *£99.95*
Entry level A1200 Accelerators - Unbelievable value
25MHz '030 with MMU & FPU. (5 Mips) - *Just* £68.95
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The A1200 3.5" InstantDrive

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Thinking of buying a **BIG** drive? Dont waste your money on ***ANY DRIVE OVER 4.3GB*** as the Amiga O/S doesn't support it! (2^32-1 bytes actually). They appear to work but overwrite the RDB after 4.3GB into the drive. Be warned!

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COVERDISKS

Amiga Doom

AMIGA
INCLUDED WITH THE MARCH '98 ISSUE OF CU AMIGA – THE WORLD'S BEST AMIGA MAG
DISK 176
DOOM
DOOM SHAREWARE DEMO!
The game that started it all... Play the real thing at last!
• Requires 68020 or higher, OS3.0+, 5Mb Fast RAM, ECS or AGA chipset
AMIGA
INCLUDED WITH THE MARCH '98 ISSUE OF CU AMIGA – THE WORLD'S BEST AMIGA MAG
DISK 178
Doom
Bonus: Virus Checker II
The game that started it all... Play the real thing at last!
• Requires 68020 or higher, OS3.0+, 5Mb Fast RAM, ECS or AGA chipset
AMIGA
INCLUDED WITH THE MARCH '98 ISSUE OF CU AMIGA – THE WORLD'S BEST AMIGA MAG
DISK 177
Doom
DOOM SHAREWARE DEMO!
The game that started it all... Play the real thing at last!
• Requires 68020 or higher, OS3.0+, 5Mb Fast RAM, ECS or AGA chipset

Arguably the World's best 3D shoot 'em up is here with some levels to get you started. Go and buy the original PC Doom to play past these initial levels.

You asked for it, you got it. It took nearly half a decade, but who's counting?

Doom is... 'it'. It is so many things it's hard to discuss the game without seeming like a flatterer, but that doesn't change anything. Doom is the game that kicked the modern first-person 3D gaming craze into high gear.

Doom is the game that made network gaming not just something for geeks on workstations. Doom cemented the idea that shareware demos can sell product. Doom is quite possibly the best game of its sort – newer 3D shooters, such as Quake, have technically surpassed it, but these games owe a great deal to the original success and innovations of Doom.

In Doom, you are a space marine on a one-man mission. In general, mass carnage is what you are looking for. Gunslinging grunts, fire-breathing imps, big nasty eye creatures and a variety of other nasties stand in your way.

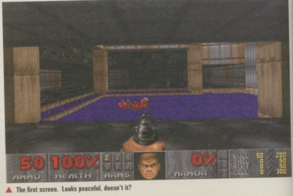
The original Doom consisted of a three-episode adventure, of which the first was freely available as a shareware demo – which you'll find included with this issue of CU. By the time you finish the game you will have literally been to hell and back. And when you get tired of that, there are hundreds of megs of add-on maps (referred to as "WAD files") out there waiting to be explored.

How did we get Doom?

Back when the Doom craze was at its peak, Amiga users campaigned for its release for our platform. Doom originated on the PC and has been ported to the Mac, various Unix platforms, as well as most modern consoles with varying degrees of success. The developers, ID Software, were unwilling to undertake such a port themselves, feeling that the Amiga gaming market did not have sufficient horsepower overall to support Doom.

They may have had something of a point, as many users in 1992-1993 were using base machines, and graphics cards were still out of the reach of most users. They were unconvinced that the fairly common 030 machines were sufficient to play Doom – they would later be proven wrong, but that's getting ahead of the story.

So, id was unwilling to port the game themselves and nobody stepped up to pursue a license. The years passed, Doom was ported to the various platforms, and id moved on to Quake, which has its own storied history for the Amiga. Not long ago, id realized that Doom's value for


50
AMMO
100%
HEALTH
2 3 4
5 6 7
ARMS
0%
ARMOR
BULL
SHEL
RCKT
CELL
50
0
0
0
200
50
50
300

▲ The first screen. Looks peaceful, doesn't it?

Loading instuctions

To install Doom to your hard drive from this month's cover disks, first boot up Workbench and then insert cover disk 176. Open the disk and you'll see an icon marked 'Drag me to HD and Click'. Do exactly that. Drag it to your prefered hard drive partition and then double click the icon. Doom will be installed on the specified drive partition in a drawer cunningly entitled 'Doom'. You'll be prompted to swap disks as and when appropriate. Once all the files have been copied over, wait a few second for them to be joined together and unpacked. Update the window display and you can then enter the Doom drawer and start the game.

You'll also find a brand new version of the previously discontinued Virus Checker II. Full documentation can be found on cover disk 176.

PICKED UP A HEALTH BONUS.
50
AMMO
87%
HEALTH
ARMS
0%
ARMOR

▲ Watch for snipers atop hills and ledges.

▲ He's set for the charge.

Important notice

These Amiga compiled versions of Doom are not in any way endorsed, authorized, licensed, or supported by id Software, Inc. The Doom source is not freeware. id Software Inc maintains copyright and will defend against infrigement of these copyrights.

future sales had more or less run its course, and released the source code as freeware, encouraging not only Amiga users but hackers worldwide to fiddle to their heart's content with the heart of Doom.

The reserve army of Amiga programmers looking for something to do sprang into action, and the net was suddenly crammed with releases of Doom for the Amiga. The most well-rounded version so far is Peter McGavin's ADoom, which we've included for your enjoyment. Others work better on certain systems, but this one is the most representative of what Doom should be like for just about everyone.

Each version of Doom has its own requirements: ADoom's are actually among the less demanding. In theory, an 020 AGA machine can play Doom, but at a postage stamp resolution it's not worth exploring. 030 users can expect the same sort of performance late 386 users got while trying to enjoy Doom – it's possible, just at cut-down resolutions. Once you get into 040 territory, you can comfortably play with a full Doom window, and a graphics board will enhance your experience by offering a notable speedup.

▲ Barrels blow up real good.

▲ Got 'em cornered!

If you are using AGA or ECS, try using the NTSC Low Res mode. Doom expects a 320x200 screen. PAL Low Res is 320x256, so the picture will look squished in PAL. RTG card users should similarly try to have a 320x200 mode defined, as the 320x240 mode has a similar drawback.

The method of Doom

Doom was not the first game of its ilk – first-person maze games date back to the 8-bits and titles like Wayout. Nor was it the first to put a gun in your hand and textures on the wall (rather than wireframe 3D, the typical 8-bit mainstay of first-person perspective). id's Wolfenstein 3D was the first successful game to do those things. But it brought them all together in a way that was unique. It also cut a few corners, relative to what you might expect from the current crop of 3D games such as Quake.

For one thing, although Doom is played from a first-person 3D perspective, the world of Doom is not 3D in the purest sense. You can climb stairs, fall off ledges, and wade in pools of muck, but the Doom map is actually 2D. The trick is that for every point on the map (a pair of X/Y coordinates), there is only one level of height (Z coordinate). So, a two-story house cannot be accurately depicted on a Doom map, although a rolling hillside can.

Map designers can get around this with tricks and illusions – how about an "elevator" on each floor which really teleports you to another point on the map so it 'looks' like you've gone up or down?

Monster AI is fairly rudimentary –

POWER-UP TOGGLED
AMMO
87%
HEALTH
ARMS
96%
ARMOR

▲ Death by chainsaw!

the monsters know they want to kill you and generally don't waste time doing it, once they catch sight of you. One nice gimmick of Doom is that with some work you can get the creatures to fight each other – they're not very smart at where they aim while in a crowd, and if somebody catches a fireball in the back he's liable to whirl around and pump a few shells into the clumsy imp that did it. It's sometimes profitable to pop into a room, get everybody's attention, and duck out hoping at least one of them will get caught in some over-anxious friendly fire.

You won't find gimmicks like complex underwater views (a lá Alien Breed 3D or Duke Nukem), jet-packs, or up/down gun aiming. Doom doesn't even allow you to jump. And the fact that you can't aim your gun up and down is nice in some ways because it means the computer handles that detail for you. It can get difficult to manage the keyboard quickly enough to turn, right your aim, and fire at a closing enemy on a different floor than the last guy you tried to take out. A blessing in disguise.

No, Doom is meant to be plain good shooting fun. To take care of business, you have a variety of weapons at your disposal:

Spike Punch: How desperate do you have to be to use this? Real desperate. But you always have it available.

Chainsaw: You have to find one, and there aren't that many around. Fortunately, they never run out of gas and are always running. Chainsaws are actually very effective ways of taking out certain types of enemies without blowing precious ammo: the bad guy's is usually immobilised while you're slicing through him. The downside is that they take a while to finish a baddie off, so if he's got friends nearby, they'll be on you in a flash.

Pistol: All you get to start out with. The pistol is reasonably effective and plenty to finish off the weak grunts. Also good for times when you need a very precision shot.

Shotgun: A good close-range weapon, good enough to take out an imp with one well-aimed shot. Ineffective over long distances. (If you buy the Doom II WAD, you can also acquire the Combat Shotgun, which is a very powerful double-barreled version.)

Chain Gun: Burns through ammo like crazy, but doesn't suffer the long reload times of the shotgun. When facing tough enemies who can't be stopped by a single shotgun blast, a chain gun is a pretty good bet.

Rocket Launcher: Ammo is scarce, but when you need to take out a really nasty foe, or a large group, a well-placed rocket will do the job.

Plasma Gun: (Registered Doom WADs) A sort of high-tech chain gun. Very pretty to look at, very deadly. The electric ammo isn't in great supply, though.

BFG: (Registered Doom WADs) The requisite "big gun with a dirty name", the BFG takes a lot of electrical ammo but delivers a massive charge which can take out an entire room of bad guys – think of it as a high-tech rocket launcher. It's very slow to fire, but won't injure you if you have to fire at close range.

Other Amiga Dooms

Other ways to play Doom on the Amiga exist. ADoom will be the ticket for most of you, but if you're dissatisfied or merely curious, you may want to give these a try:

DoomAttack: DoomAttack has a few nice aspects, most notably the built-in screenshot capability. It runs well on lesser-equipped AGA Amigas, but those with faster machines or an RTG board should stick with ADoom.

PsiDoom: This version uses AHI for audio support (in case you want output through a sound card, for example), and is hoping to have networking support (as ADoom does already) in the near future. RTG board users, again, should steer clear.

AmigaDoom and AmiDoom: Both of these versions rely on the ixemul library (which makes porting Linux source code, such as Doom, easier). AmigaDoom makes use of AHI and another library as well. They're competent jobs. The waiting is the hardest part, but that's over with now. Doom is here, it'll keep you busy, and when you begin to tire, just wait to see what Quake can do for you.

Mum said not to play by exploding barrels.

They'd like to have a brief discussion.

Honourable Mention
Weapon – Barrels: Not a weapon as such, but these barrels of toxic sludge are explosive. Get too close to one in a firefight and you might have your face blown off. But put a couple of bullets into one while an imp is loitering nearby and suddenly he's a pile of red goo.

Facing your Doom

There are a number of ways you can approach a game of Doom. You can save your progress, so you can think of the game as a long campaign and plow through the game by any means necessary. You can think of Doom as a race game with deadly obstacles and aim to complete each level in the minimum time possible. (id provides what they consider is an "average" time to complete each level. I think they're crazy.) You can try to find every bad guy and kill him before exiting to the next scene, or search every wall and doorway looking for secret doors to find the bonuses hidden in them.

Big. Pink. Brutal.

You can start the game by entering all the cheat codes you can think of and simply enjoy a mindless, pointless monster whomp by launching nothing but rockets at anything that gets in your way. And when you want to play the underdog, try Nightmare mode, where the cheat codes don't function and the enemies rise from the grave almost as quickly as you can finish them off.

As interest in Doom on the Amiga grows (and some of the programmers who might be tempted to spend time on a port find that top quality ports are being done by others), expect to see an ever-expanding library of Amiga tools for Doom, such as level editors, as well as WADs authored by other Amigans.

Bringing your Doom

There's a motley crew of characters waiting to deprive you of your life.

Grunts: These come in two varieties, the latter and more powerful are often referred to as the "sergeants" and are the ones who carry the shotguns. A shotgun blast takes care of any of these.

Imps: The fire-breathing nasties. You need at least a shotgun to really make an impression.

Demons: They're pink but they're really evil and nasty. If you have the ammo to spare, take them out with a chaingun. (By the time you reload your shotgun they'll have torn you to pieces.) Alternately, if your back is safe, use a chainsaw— they can't get their jaws on you while you're slicing them open.

Spectres: Just like the Demons except they're nearly invisible. Hard to detect in Doom's low-light situations, of which there are many.

In the shareware WAD we've included, these are the only enemies you'll have to face (except one, but we'll leave that as a surprise). Other WADs introduce the huge eye-creatures (cacodemons), flying skulls, and horrifying nightmarish creatures with weaponry all over their distorted bodies who will make you run screaming for a relaxing session of SWOS. ■

Jason Compton

New! The Eyetech Complete Guide to Towering your A1200

Stop Press: Fully built EZ-Towers now just £99.95; D-I-Y EZ-Tower kits just £79.95.

Keyboards and adapters; High density floppies; 100MB+ cartridge drives; Multiple IDE/ATAPI devices; Zorro slots; High-res graphics cards and scan doublers; PC-Pentium slave boards; Siamese System.

Do-it-Yourself EZ-Tower

If you are confident about undertaking a small amount of metalwork using hand tools then this is your lowest cost route to a really professional A1200 Tower system - capable of all the other expansion opportunities oulined on this page.

To build your D-I-Y EZ-Tower you will need to:

- √ Remove the back panel of the supplied PC tower by drilling out the aluminium pop-rivets
- √ Remove a section of internal shelving by making three short hacksaw cuts
- √ Trim down a removable plate using metal shears or a hacksaw and deburr any sharp edges with a file
- √ Fasten the custom back panel back in place using the screws provided or your own pop rivets.
- √ Clip the A1200 power adapter on to the PSU cables using a pair of pliers and the Scotchlock (squeeze-type) cable joiners provided.

Thats it! You've just saved yourself £20 for around 20 minutes work.

The Eyetech *DIY EZ-Tower* costs just *£79.95* - including all the components supplied with the ready-built *Mk2 EZ-Tower*.

The *DIY EZ-Tower* is also available *without the PC tower* for £39.95 inc VAT @17.5%

Floppy drive and backup options

Bear in mind that you should ***always*** have a bootable floppy drive connected to the internal floppy drive 34-pin header as this may be the only way to boot your computer in an emergency. (Catweasel, Diskplus etc are not bootable)

Your DF0: options are:

- √ Use your old drive with the faceplate & extension cable supplied
- √ Use Eyetechs ***EZ-DF0*** adapter - £14.95, or £34.95 complete with new ***Sony*** floppy drive mechanism with built-in faceplate.

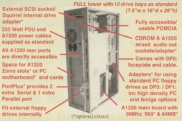
Backup and high density floppy drive options:

- √ Mount your external floppy in the EZ-Tower as DF1. (Its lead must be at least 70cm or you'll need a ***50cm extension cable*** - £12.95)
- √ Use a ***DiskPlus*** interface (you can still use 4 drives on the IDE port - Catweasel doesn't allow this) for DD/HD/XHD Amiga/PC disks
- √ Use an ***Eyetech LS120*** drive* on the IDE port. Reads & writes PC format 720KB/1.44MB diskettes & ***120MB superdisks*** (£14.95/1 or £34.95/3)
- √ Use an ***Eyetech IDE Zip*** drive* for standard data interchange with PC's, Mac's (supported by Shapeshifter) and other Amigas.

** Eyetech EZ-IDE software required*

Eyetech EZ-TOWER

"This definitely one of the easiest solutions to building your own tower." Amiga Format - July 1997
"The Eyetech tower offers clever solutions with a Velcro easyfit mentality" Cu Amiga - Oct 1997



FULL tower with 10 drive bays as standard (7.5"w x 16"d x 26"h)
External SCSI socket/ Squirrel internal drive adapter*
250 Watt PSU and A1200 power cables supplied as standard
All A1200 rear ports are directly accessible
Space for A1200 Zorro slots* or PC motherboard* and cards
PortPlus* provides 2 extra Serial & 1 extra Parallel port
Fit external floppy drives internally
Fully accessible/ usable PCMCIA
CDROM & A1200 mixed audio out sockets/adapter*
Comes with DF0: faceplate and cable.
Adapters* for using standard PC floppy drives as DF0: / DF1: inc high density PC and Amiga options
A1200 main board with 66Mhz '060* & 64MB*

(*optional extras)

It Couldn't be Easier!

- √ Remove the case top and keyboard ribbon cable *(No shield removal required).*
- √ Slot in the ribbon cable from the optional PC/ Amiga keyboard interface.
- √ Mount existing and new hard and floppy drives and CDROM units in the bays using the screws provided.
- √ Connect up the drives power and data cables.
- √ Make 3 small locating notches and clip the A1200 motherboard/base into the custom backpanel.
- √ Push on the power/HD/FDD LED adapter and the A1200 power connector.
- √ Put back the outer case. Thats it! ...

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(... but only available whilst stocks last!)

- √ ***Ready built EZ-Tower*** with 250w PSU
- √ ***EZ-Key*** keyboard adapter, ***Windows95 keyboard.***
- √ ***Full UK specification A1200, Kickstart 3.1/Workbench 3.1*** disks, manuals, mouse, mousemat and TV lead.
- √ ***880KB floppy drive*** including faceplate
- √ Fantastic software bundle including ***Wordworth 4SE, Turbocalc 3.5, Datastore 1.1, Photogenics 1.2SE, Personal Paint 6.4, Organiser 1.1, Pinball Mania and Whizz***
- √ All items fully installed, tested and ready-to-go!

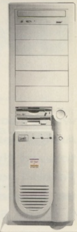
Complete EZ-Tower floppy system as described left for an unbelievable *£349.95*

Why not have these upgrades installed *at time of purchase only* at the following very special prices:

- √ ***1.2GB*** TowerDrive and cable for ***Just £89.95***
- √ ***Apollo '030/33MHz accelerator with MMU, FPU*** and ***8MB*** memory for ***Just £89.95***

* Prices in this box are not valid in conjunction with any other offer from Eyetech

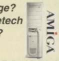
What about PowerPC upgrades? The Blizzard PowerPC boards from phase5 will fit in the trapdoor space of an EZ-Tower'd A1200, with or without a Zorro expansion board. However you should bear in mind that the PPC boards will be limited to providing 'subroutine' support to specially written 680x0 programs (just like an expensive FPU) for the forseeable future. If and when a proper native PPC Amiga operating system is available Eyetech will start stocking and supporting these boards directly.



The A1200 EZ-Tower

Looking for an all-in-one package? Why not treat yourself to the Eyetech EZ-Tower Professional Pack?

Just look what you get for an unbelievable *£799.95!*



The Eyetech Professional pack comes with a full EZ-Tower, new WB3.1 A1200 and ...

EZ-KEY & Win95 k/b,

25MHz '040 & 16MB fast RAM,

8x CDROM, 1.7 GB HD, EZ-IDE s/w & 4-way EIDE i/f.

The optional LS120 120MB Superfloppy

- √ ***EZ-Tower*** with full UK specification A1200, ***Kickstart 3.1/Workbench 3.1*** disks and manuals, mouse, mousemat, TV lead and 250watt psu.
- √ ***EZ-Key*** keyboard adapter, ***Windows95 keyboard.***
- √ ***25MHz '040*** processor (approx 19 Mips) with MMU & FPU and ***16MB*** of program memory.
- √ ***1.7GB TowerDrive*** with Workbench 3.1 and shareware utilities preinstalled
- √ ***8-speed CDROM*** including the ***Eyetech 4-device buffered interface*** with ***fully registered EZ-IDE*** CDROM/hard drive/IDE Zip drive/LS120 driver software (see main ad for EZ-IDE details)
- √ ***880KB floppy drive*** including faceplate
- √ Fantastic software bundle including ***Wordworth 4SE, Turbocalc 3.5, Datastore 1.1, Photogenics 1.2SE, Personal Paint 6.4, Organiser 1.1, Pinball Mania and Whizz***
- √ All items fully installed, tested and ready-to-go!

AND the option to have:

- √ An ***LS120*** 720KB/1.44MB/120MB super floppy drive/cable installed in your machine for ***just £89.95 extra*** (at time of purchase only)

Graphics cards, scan-doublers and the single-slot Zorro option

The Eyetech single slot Zorro adapter fits close to the A1200 main board allowing a PC motherboard and selected PC cards to be fitted simultaneously. It has primarily been designed for use with Amiga Graphics cards such as the Cybergraphics 64/3D from phase5. Please note that as there is no practical, reliable way to abstract the video signals present on the A4000 Zorro video slot from an A1200 (without soldering onto the main board) you cannot successfully use the built-in/optional scan doublers on the Picasso IV or Cybervision64/3D boards with any add-on A1200 Zorro adapters.

To overcome this limitation Eyetech has produced two plug-in adapters which can be used either individually or together - depending on your existing monitor's scanning capabilities.

The ***AUTO-MON*** adapter works in conjunction with the Cybervision 64/3D card to automatically display the output of your current program whether retargetted to the CV64/3D card or displayed via the AGA chipset. If you have an Amiga-compatible multisync monitor the *AUTO-MON* is all you need for seemless use of your Amiga.

The ***EZ-VGA*** adapter is an external unit that attaches to the 23-pin video socket of any Amiga and automatically scan-doubles any 15Khz screen mode signals so that they display correctly on a normal PC SVGA monitor. PC-compatible screen mode signals (DBLPAL, Productivity, Super72 etc) are passed through unaltered.

AUTO-MON adapter £39.95
EZ-VGA adapter £79.95

Love your A1200 but need PC compatibility for work or study purposes? Then you need Eyetechs EZPC-Tower system!

Just *£999.95* gets you a fully loaded Siamese ethernet system with:

EZPC & Amiga ethernet adapter

HD,CDROM,FDD & optional CDROM Writer upgrade

- √ A full Amiga EZ-Tower system ready to take your A1200.
- √ Jumperless 266MHz-capable PC Pentium board with 200Mhz cpu, 32MB of memory, Win95 keyboard & mouse & second fan.
- √ Full-screen full motion full colour video capture card with TV tuner and frame grabber (with video camera input).
- √ High performance, high res graphics card with full screen/full frame rate MPEG play-back.
- √ 32-voice high performance sound card with direct-to-disk, CD-quality recording software.
- √ 2.1GB hard drive, 16-speed CDROM, 2x S,1xP & USB ports and 1.44MB FDD .
- √ Full ***ethernet Siamese 2.5RTG*** system with ***Amiga and PC ethernet cards***, driver software, cables & terminators and ***scandoubling system for non-retargetable Amiga screens*** such as games. (The ethernet Siamese system requires an Amiga TCP/IP stack - as used by Internet software - and Windows95 operating system - see below)

EZPC options (at time of ordering only) :

- √ CDROM upgrade to CDROM 2xwriter, 6x reader ***+£249.95***
- √ Windows 95R2 OS & Lotus Smartsuite bundle (WordPro, Lotus 123, Approach database, Organiser, Freelance Graphics etc) ***+£99.95***
- √ Miami Amiga TCP/IP stack (fully registered) ***+£19.95***

Ring for hard drive, CDROM, memory & processor upgrade options

All EZ-Towers ...

...feature a slide-out mounting frame for fitting either ...

...a standard PC motherboard and cards, or...

...a Zorro board and cards (as well as your A1200).

he EZ-Tower has great accessibility!

ust undo 5 screws to remove the back and side anels. Another 4 screws and the PSU can be oved to allow you fully access the A1200 board.

EZ-Tower Pricing Information

Code	Description	Price £	Code	Description	Price £
EZ-Tower cases , systems, keyboards & accessories			*Zorro adapters, graphics cards, LS120 & floppy drives*		
CASE-FT-1200	EZ-Tower case	99.95	ADPT-Z2-A12/1	1-slot Zorro 2 adapter	99.95
CASE-FT-KIT	EZ-Tower DIY option	79.95	ADPT-Z2-A12/7	7-slot Zorro 2 adapter	179.95
CASE-FT-EXKT	EZ-Tower DIY no PC case	39.95	ADPT-Z2-KBUG	EZ-KEY upgrade for Z2 adp	35.00
A12-MGK-EZTW	EZ-Tower w/ A1200 system	799.95	GFX-CV643D	Cybergraphics 4MB Z2 card	159.95
APC-SIA-EZTW	EZ-Tower w/Siam & PC sys	999.95	GFX-MONSW-AUT	AUTO-MON switch for CV643D	39.95
CDR-2/6-UG	6x/2x CDRead/Writer upgd	249.95	ADPT-GFX-SDBL	EZ-VGA 23p in-line scandbl	79.95
KBD-A4000	A4000 k/b intl 6p minidin	39.95	INT-12I-CD4	4-dev EIDE buff interface	39.95
ADPT-KBD-6P5P	6-pin mini to 5 pin adptr	6.95	DVR-EZIDE	Univ'l IDE/ATAPI dvr/enhan	34.95
KBD-WIN95	Win95 kbd 5p EZKEY compat	19.95	DVR-EZIDE-SP	EZIDE w/ INT-12I-CD4/LS120	17.50
ADPT-KBD-1200	EZ-KEY auto Amiga/PC 5pin	39.95	HD3-LS120	ATAPI 0.72/1.44/120MB FDD	99.95
ADPT-AUD-EZTW	Audio mixer Amiga/CD RCA	19.95	HD3-LS120-CT3	3 x 120 MB superfloppies	34.95
ADPT-SCS-EZTW	Squirrel int/ext SCSI adp	19.95	INT-12C-DSKPL	DiskPlus FDD i/f DD/HD/XHD	69.95
ADPT-DF0-TWR	Floppy extn cab & faceplt	12.95	INT-Z2-IDEPL	6xIDE(exp->10)+DD/HD/XHD FD	79.95
ADPT-DF0-FP	Int floppy drive faceplat	6.95	INT-SER-PPL	2 x 460Kbaud S + 800KB/s P	89.95
INT-FDD-DF0	EZ-DF0 Sony PC FDD i/f DF0	14.95	INT-SER-PJR	1 x 460Kbaud highspeed ser	46.95
FDD-INT-DRINT	Sony FDD w/faceplate/EZDF0	34.95	ADPT-HD-2/3	2.5"HD->3.5" bay & cab adap	12.95
PLUG-IEC	Rewirable PSU outlet plug	4.95	CAB44-2W-60C	2.5"HD 60cm cab 44-44 way	19.95

Eyetech Group Ltd
The Old Bank, 12 West Green,
Stokesley, N Yorks, TS9 5BB, UK

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Tel Int'l:	**+44 (0) 1642 713 185**
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Next Day delivery to EC and USA/Canada. Worldwide deliveries in 2-7 days from receipt of faxed order and payment details. (eg SX32 next day to NYC £25.30)

UK m'land next day insured del'y charges: S/w, cables, buffered i/f £3; 2.5" drives, accel's, £6; manuals £7; 3.5" drives, PSU, SX32 £8.50*; CD+, MTwr £10*; EZTW £15*. (*2day)

Ring/fax/email for other delivery costs

UK bank/building society cheques, Visa*, Mastercard*, Switch, Delta, Connect, Postal/ Money orders accepted. * A 3% surcharge is applicable to all credit card orders.

Due to space limitations some of the specs given are indicitive only - please ring/write for further details. **Please check prices, specs and availability before ordering. If ordering by post please include a contact phone no.** Goods are not supplied on a trial basis. E&OE. All prices include VAT at 17.5%. VAT is not applicable to non-EC orders

Usergroups

Welcome to the first volume of our brand new Amiga user group directory. Our aim is to put as many like-minded Amiga users in contact with each other as possible, and to that end we'll be updating and expanding this directory on a monthly basis.

This month sees the first batch of entries we've recieved and there will be more next month. In future issues of CU Amiga you'll find the revised user group listings in the Workshop section toward the back of the magazine where it will take up permanent residence. To add your group to the list, simply fill in the form opposite and post it to us, or use the online version at our web site www.cu-amiga.co.uk. You'll fin it in the Surveys section.

● Amiga Christchurch Inc.

Location: Christchurch New Zealand
Contact by: Phone
Contact: Annette Leonardo
Telephone: +64 03 3390232
Details: Meeting times: Second Tuesday of every month 7:30 pm. Places: Shirley Community centre, Shirley Rd. Services offered: Monthly newsletter, over 2000 programs on disk or CD-ROM. Other: Magazines & Video library, SIG groups.
Address:
ACI
P.O. Box 35-107
Christchurch
New Zealand

● Amipack

Location: World Wide – An Amatuer Radio Amiga group
Contact by: Email (DJKus@CarsonJ.clara.net)
Contact: Paul Carson
Telephone: NA
WWW: None yet
Details: Meeting times: None. Places: On the Amatuer Radio Packet network. Services offered: Radio s/ware and weekly Amipack bulliens on Packet radio. Other: We offer a large selection of radio related shareware and write a weekly news bulliten on the Amiga scene from around the world.
Address: 10 Belgravia Avenue,
Bangor, Co.Down,
N.Ireland
BT196XA

● Waaslandia

Location: Belgium
Contact by: Email (waasland@glo.be)
Contact: Tony Mees
Telephone: + 32 (0) 3 744 13 19
WWW: http://titan.glo.be/~waasland
Details Meeting times: 12 meetings in month. Places: We have 6 Amiga clubs in Belgium: Antwerpen; Merksem; Aalst; Mechelen; Turnhout; St-Niklaas
Services offered:
- Amiga-only computer club
- infostand on 15 computer fairs in Belgium – lessons for experts as well as beginners – a free club magazine of about 50 pages
- free soft and hardware advice
- travel to foreign Amiga fairs
- an Amiga CD library
- close contacts with German companies
- own club CD production
- own Amiga club T-shirt design
- an Internet club with our own homepage, IRC channel, mailinglist, Amiga Internet helpdesk and a webmaster who is beta-tester for different well know programs.

Other:
We our organising an Amiga computer fair in Antwerp at the end of April with lots of Amiga companies and developers! Please check out our homepage for more info!
Address:
Lepelstraat 11
9140 Steendorp
Belgium

● Wigan & West Lancs Amiga User Group

Location: Wigan/West Lancashire
Contact by: Email (ssamiga@warp.co.uk)
Contact: Simon Brown/Ralph Twiss
Telephone: Simon: 01257 402201 (after 6pm - answerphone other times) or Ralph:01695 623865
WWW: www.warp.co.uk/~ssamiga
Details: Meeting times: Sundays at 1pm
Places:St Thomas the Martyr School Hall, Highgate Road, Up Holland, Lancs
Services offered: Free PD library,free net access, free help, free printing, cheap software, cheap hardware, free flatbed scanning Other: 60+ members (about 25-30 turn up each week) Admission is £2.00. Refreshements are available. Great modern facilities and car parking.
Address:
79 Woodnook Road
Appley Bridge
Wigan
WN6 9JR &
32 Higher Lane, Up Holland, West Lancs

● Alpha Software

Location: Newcastle, UK
Contact by: Email (gazy@globalnet.co.uk)
Contact: Gareth Murfin
Telephone: 01670 715454
WWW: http://www.users.globalnet.co.uk/~gazy/
Details: Meeting times: 8-9pm. Places: IRC #AmIRC GalaxyNet Services offered: Advice, Online games, Free Alpga Software. Other: Support for Gloom 3 and DWaRFx
Address: Alpha Software.
Gareth Murfin.
113, Cateran Way,
Collingwood Grange.
Cramlington
Northumberland.
NE23 6EZ.
UK.

● Convergence International

Location: International
Contact by: Email (enquiries@convergence.eu.org)
Contact: Ben Clarke
Telephone: 0956 985959
WWW: www.convergence.eu.org
Details: Meeting times: 8pm (GMT), Wednesdays and Sundays Places: #converge (IRCnet), mainly admin only but members are welcome Services offered: Comprehensive news service on our web site; fortnightly newsletter; technical support for members; coming soon: a new non-wintel hierarchical search engine Other: Convergence International is the premier non-Wintel user group, open to users of all non-Wintel based systems. Membership is free and is open to anyone who wishes to actively support the non-Wintel cause.
Address: 49, St. Gilberts Road
Bourne
Lincs
United Kingdom

● Amiga Club Genk

Location: Genk, Belgium
Contact by: Email (amiga.club.genk@skynet.be)
Contact: Bart Vanhaeren
WWW: http://users.skynet.be/amiga/acg
Details: Meeting times: every 1st sunday o/t month Places: Cultural Centre of Genk, meetingroom 1 Services offered: Support for hard- & software related problems, workshops, PD-collection, monthly newsletter, magazine subscriptions
Address: Weg Naar Zwartberg 248
B-3660 OPGLABBEEK
BELGIUM

● Relax ITC

Location: Poland
Contact by: Email (shandor1@polbox.com)
Contact: Shandor
Telephone: ++48-91-357184
WWW: -
Details: Meeting times: all week
Places: no specifid
Services offered:
Other: We're Polish crazy demo group.
We make a IXML disk magazine and we love Amiga as YOU !
Address: ul.Maciejewicza 1/27
71004 Szczecin 10
Poland

● National Capital Amiga User Group NCAUG

Location: Washington D.C. USA
Contact by: Phone (send us your phone number!)
Contact: Matt Bell
Telephone: 10pm - 1am US Eastern STD Time
Details: Meeting times:12:00 noom EST
Places:Dolly Madison Library
Services offered:Demos support and help
Other:Special Interest Group Include the following:
Internet; Music; Programming; Video;
New Users; Hardware; Public Domain;
and the must important one PIZZA SIG.
Address: Matt Bell
211 Finchingfield Court
Sterling, VA 20165-6404 USA

● Amiga World Special Interest Group

Location: Athens, Greece
Contact by: Post
Contact: Menis Malaxianakis
Telephone: 301 - 9026910/9012019
WWW: http://www.compulink.gr/amiga
Details: Meeting times:17:00 at Saturdays Places:Athens
Services offered:Help,translations, contacts etc.
Other: Forming developer groups for new Amiga programs
Address: Menis Malaxianakis
Giannitson 11str.
PostCode: 17234
Dafni, Athens, Greece

● Amiga Forever!

Location: Hampshire
Contact by: Post
Contact: Stuart Keith
Telephone: 01703 861842 all day
Details: Services offered:Aminet
Other:Disk mag software xchange
Address:
101 Ewell Way
Totton, Southampton
Hants, S040 3PQ

● Mutual Amiga Computer Enthusiast (MACE)

Location: Beresfield, Newcastle, Australia
Contact by: Email (ken@rich.com.au)
Contact: Ken Woodward
Telephone: after working hours
Meeting times: 7PM 1st & 3rd Wednesdays. Places: Beresfield Bowling Club.
Services offered: help, training, graphics. Other: Fun family atmosphere. All welcome.
Address: 59 Carnley Avenue
New Lambton, Newcastle
New South Wales, Australia

● Kickstart - The Surrey Amiga User Group

Location: Surrey
Contact by: Phone
Contact: Rob Gilbert
Telephone: 01932 875336
WWW: www.arrakis.u-net.com
Details: Meeting times: Monthly
Places: Varies
Services offered: tower advice, Shapeshifter sessions, DTP, music, Net etc. Other: Newly formed group welcomes any Amiga users in the area for chat, advice etc
Address:
10 BRox Road
Ottershaw, Surrey, KT16 OHL

● Canberra Amiga Users Society Inc (CAUSe)

Location: Canberra, ACT, Australia
Contact by: Phone
Contact: Alex Cameron (Secretary)
Telephone: (02) 6286 2966
WWW: http://www.spirit.net.au/~jamesm/CAUS/
Meeting times: 2nd Thursday of the Month from 8pm. Places: Woden Town Centre Library (Entry - The Elm Cafe). Services offered: PD Library, Aminet CD's, Bulletin Board System, SIG's, Bi-Monthly Newsletter, Raffles etc. Other: The User group also promotes the Amiga at local PC Computer Fairs :)
Address: Canberra Amiga Users Society
PO Box 596, Canberra ACT
2601, Australia

User Groups, CU Amiga, 37-39 Millharbour, Isle of Dogs, London, E14 9TZ.

Alternatively, fax it to 0171 972 6755, or use the online version of the form which can be accessed from our web site at www.cu-amig.co.uk. This service is completely free of charge.

General location:..
Tel: (please specify suitable hours/days).........................
Postal Address: ....
....
....
....
Details: (e.g. meeting times and places, services offered etc.)..
....
....
....

Group name..
E-mail: ....
Web Site: ....
Contact name:...
Preferred contact method; (please tick)
☐ Post ☐ E-mail ☐ Phone

CU AMIGA MAGAZINE

Amiga
Next Generation

After the years of going no-where, suddenly the Amiga seems to be going all over the place. We take a look in our crystal ball and see PPC, Alpha and a fundamental revolution in computing.

powered by AMIGA

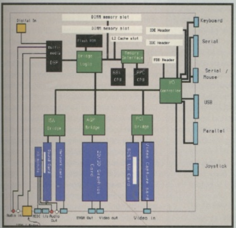
It is an old and somewhat dishonourable tradition of the Amiga magazine to speculate on what the next Amiga would be like. It has been a bit out of fashion while there has been no owner of the Amiga to enact any such possible plans. All of a sudden a lot seems to be happening at once and the time looks ripe to speculate again.

In the past such speculation has tended to be interesting, optimisitic and inaccurate. Today, the rules of the game have changed. We are no longer in the business of second guessing the Amiga engineers' plans for the next model of the Amiga, because the days of the old single company generational development are over.

We already have companies such as Micronik building what are in effect new models of the Amiga based on the old A1200 motherboard design, and clones based on Amiga motherboards entirely developed by third parties.

There is the development of the A\box and the PIOS 1 to consider, as well as the fascinating implications of the revolutionary InsideOut. Amiga Inc. themselves have said they will be concentrating on R&D rather than manufacture, but we can expect to see them introduce some major twists in the development of the Amiga hardware platform as well as operating system (OS) developments. We can expect to see a significant impact on the OS from ProDAD, phase 5, the AROS project and HiQ, too.

The whole face of the Amiga is changing, and may just be leading the way to the next paradigm of computing.



This block diagram displays an approximation of the constructional layout of a putative next generation Amiga. A PPC chip and a 68K CPU work in unison – not an ideal arrangement but one that can be implemented tomorrow. Industry standard busses allow modern specifications for graphics, sound and peripheral expansion. A Multimedia DSP adds major power with all sorts of image and sound manipulation facilities as well as a host of other uses such as providing comms facilities.

Where do we go now?

Scrying out the next Amiga we are likely to see requires no crystal ball, it has already been announced and a functioning prototype was on display at Computer '97 in Köln in November. Shortly after you read this the A5000 from Power Computing and DCE is due to be released. Fundamentally grounded in the Amigas of the present, the A5000 is touted as being a model somewhere between the A1200 and A4000 in terms of specification but in fact is closer to being a Zorro 2 equipped A4000.

Built to the ATX form factor standard popular in the PC world and designed for wider compatibility to industry standard hardware, the big advantage of the A5000 is likely to be price. The on sale price of an A5000 with Zorro 2 slots and a 68040 is likely to be significantly less than the cost of a similarly specced – up A1200, bringing the current high end of Amiga computers to a more reasonable entry level price.

The 68060 equipped A6000 is due to follow later in the spring and will roughly speaking equate to a snapshot of a current top specification machine at the kind of cost an unexpanded A4000 would be cheap at.

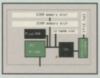
While the A5000 is likely to be a popular machine, it is more a kind of ideal form of the last generation. It was said way back when the A1200 and A4000 were released that a middle ground was desperately needed, and that gap was never filled.

The doomed Walker from Amiga Technologies in the Escom era was meant to do exactly that, but the collapse of Escom put paid to those plans. The A5000 represents very much the same thing, although the hardware specification is a couple of years more advanced.

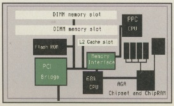
However attractive it may be there is nothing really new in it beyond the presentation.

Around the same time we should be seeing the launch of the BoXeR from Index Information, makers of the Access Amiga based multimedia platform. Called by some the unofficial new Amiga, this new motherboard represents a few genuine developments of the hardware and a more modern architecture. With an AT form factor board it will, like the A5000, use industry standard casing and components, keeping the price lower. While Boxer systems are expected to be a little more expensive than the A5000, they also represent a more powerful system than the A4000 and will be the most high specification Amigas yet made.

The BoXeR motherboard will be sold separately for the DIYer or in a prebuilt system. It will also be available to trade as an OEM part, allowing other comapanies to offer their own BoXeR based systems in just the way do many offer custom built PCs today. It is highly expandable, with a 68040/060 compatible CPU slot which allows a processor that matches the wallet to be plugged straight in and used at the clock speed you set with a jumper on the motherboard. Zorro slots are joined by fully active ISA slots, which will accept very cheap expansion cards designed for the PC. Already software drivers for Soundblaster sound cards, an internal modem and an ethernet card are in the works.



One possible shape of the future Amiga. A CPU module like this would be ideal for OEM computer construction and would make multiprocessing computer systems far easier to develop. A similar design below contains 68K and AGA for full backwards compatibility and a PPC and PPC/PCI bridge for a cost effective solution to PCI bridging and drop in high power Amiga systems largely using currently realised technologies. The InsideOut from Index Information falls somewhere between these two designs.



All the standard Amiga specific parts are there, including the AGA chipset and 2Mb of Chip RAM, in this case running about 30% faster than current designs due to an improvement in the memory interface. Fast RAM of up to 2 Gb is supported and there is a reprogrammable flash ROM to allow the ROMs to be updated from software.

Adding further to the theme of hardware compatibility, the BoXeR can read PC floppy drives, has two buffered 40-way IDE headers and a video slot header which should take, amongst other things a scandoubler for SVGA monitor use. One very interesting addition is a mass termination DMA header. This large collection of header pins adds an interface for a dual processor.

The implications are intriguing, to say the least. The most obvious use, and the one first mooted, is to allow a PowerPC chip to be added for multiprocessing very much along the lines of the phase 5 PowerUp cards. However the possibilites are larger than this. The recent announcement that HiQ and Index Information are working towards Amiga/Dec Alpha integration, at first through the Siamese and eventually through a port of Amiga OS to Alpha native code, suggests that PPC might not be the only processor BoXeRs will end up being fitted with.

The next step

The BoXeR and A5000, while undoubtedly getting us away from the clumsy and scarce A1200 motherboard, do not in themselves offer a whole lot more than making the basic hardware a more viable proposition.

Fitted either with a PowerUp card and a Cybervision PPC graphics card or similar, and you will have a computer which is stable, runs Workbench and AmigaOS fluently, and is capable of running software with the power necessary to compete with what is out there today. While an excellent way of bridging a gap, we have to look a little further into our crystal balls to see a moe radical shift.

About a year ago, we were hearing a lot about the PIOS TransAM, an Amiga "clone" based on the PowerPC Common Hardware Reference Platform, a standard architecture developed by Motorola and Apple for PPC based computers. The concept behind this was that anyone could make a CHRP machine, and any CHRP compliant OS would run on it.

Hardware problems and difficulties

caused by Apple's change of policy with Mac and CHRP licencing has caused long delays, but we should see something from PIOS this year. The idea behind CHRP is an attractive one, gaining a lot of support amongst 'in the know' Amiga users as a possible future shape of Amiga hardware. The basic structure of a CHRP machine is one in which the CPU is directly bridged to a PCI bus which is then used as the data bus for the computer. All the parts plug straight in.

The advantage of this sort of design is that it is very cheap to produce and allows the construction of computers based on off-the-shelf custom chipsets as specified by the manufacturer or left up to the users choice. The TransAM is intended to run pOS, a PowerPC native OS from well known German Amiga animation software company ProDAD. However other CHRP compliant OS's such as MacOS/BeOS could in theory run on the same platform, even side by side.

The future of the TransAM is rather obscure right now. Being a PowerPC platform, it will not run Amiga OS 3.1 as there is no PowerPC version of the OS at present, and therefore the status of the TransAM is dependent on the development of pOS – without official backing from Amiga Inc, pOS is a bit of an unknown at the moment.

phase 5 have their own PowerPC Amiga "clone" in the works, the A\box. This revolutionary design steers away from the off the shelf approach of the TransAM and follows an architecture more akin to advanced graphics workstations than to a cheap desktop computer. phase 5 have warmed the heart of many an Amiga traditionalist by announcing a custom chipset, including the potentially very powerful Caipirinha chip, named after the Brazilian national drink.

Caipirinha is a co-processor which controls the memory interface of the computer in a fundamentally different way to the current Amiga. By offering highly efficient access to system resources, this has the potential to make the A\box a potent multimedia tool.

Although the A\box is like the PIOS TransAM, a PPC based machine, there are currently no plans to run ProDAD's pOS on it. phase 5 have made it clear that they don't want to be in the position that PIOS is in of being dependent on another company to provide the basic software necessary for the A\box to function. phase 5 will therefore be producing their own Operating System for the A\box, which like pOS is meant to be a very Amiga OS like system.

Emulation speeds

Running 68K code under emulation on a PowerPC with PowerPC AmigaOS would cause few problems. In fact, before too long the Power of PPC chips should allow this emulation to run faster than it can on any native 68K system. You can't test a product that doesn't exist yet, but we did the next best thing and tried it on a Mac. Running Duke Nuke'm 3D (68K version) on a variety of Macs and recording the frame rate gave some interesting results:

- **Mac Quadra 68040/33 – 11 fps**
- **PowerMac PPC601/66 – 3fps**
- **Powermac PPC 604e/200 – 14 fps**

As you can see, the early PPC601/66 Mac, using a chip barely faster than an '060/50, was hopeless, but a 604e/200 did it faster than it ran natively on one of the fastest models of 68K Mac built. We hope to try it on a 300MHz model soon!

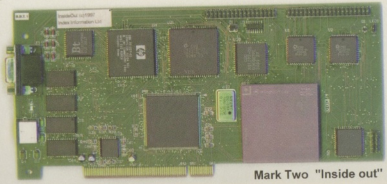
There are going to be quite a few differences too, as phase 5 intend on making A\box OS more like UNIX. However with the latest date for A\box pushed back to late 1999 to give phase 5 more time to concentrate on their PowerUP project, in the meantime a lot can happen. A fascinating third strand has been added to the equation the Project Alpha. HiQ have been bringing the Amiga OS to a more technologically developed platform for a while now, and the way they have done it without all the complexities involved in producing an entirely new computer system and all the compatibility problems that causes, is through the Siamese system. Siamese allows you to connect an Amiga and a PC together in such a way that the two OS's run on the same screen and smoothly integrated. The output of the Amiga is retargetted to the PC via an ethernet connection, while any Amiga software, such as the OS and any applications, run on the Amiga hardware. Although the bottom line is still the lagging technology of the Amiga, the host PC takes the input/output strain from the Amiga allowing it to dedicate more of its time to running software.

The next step for the Siamese is Project Alpha, which retargets the Amiga through a Dec Alpha machine. Fundamentally this is a very similar set-up to the PC Siamese, but will appeal strongly to Amiga Lightwave users, for instance, who can connect their Amiga to an Alpha Station running at over 600 MHz, running Lightwave alongside the Amiga version, rendering at ultra high speed and recording out onto the Amiga Toaster.

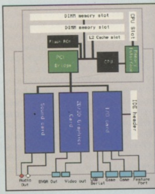
A really interesting twist to this is the development of the InsideOut from Index Information. InsideOut is an Amiga on a PCI card. This simple notion is something people have been suggesting for years, and not without good reason. Firstly, by exchanging the ethernet link for a PCI bus, the Siamese system gets a significant speed up. PCI is many times faster than ethernet at maximum speed. However the implications go much further.

The InsideOut has a PCI bus on it, which means that it could follow the basic design concept of CHRP system and become a PCI based Amiga on its own. Alternatively, it could be connected via the PCI bus to a Mac or a PC as well as an Alpha, and interestingly enough could also be connected to an A\box or a TransAM. This approach may end up being essential to these computers, as it would ensure backwards compatibility. An A\box with an InsideOut inside could run all Amiga software, bridging the gap to a new, "near AmigaOS" very nicely.

There is an interesting similarity between



Mark Two "Inside out"



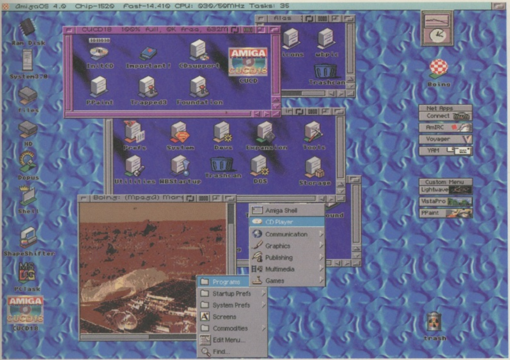
Amiga Games console anyone? There are any number of uses the Amiga may be put to in the future, and this is one of them. The block schematic shows how a CPU module as described on the previous page could become the heart of such a piece of hardware.

Welcome to WorkBench 4.0

What makes an Amiga an Amiga (without dropping to far into the murky depths of dualist philosophy) is the operating system. There is a lot that has to be done to AmigaOS to bring it up to date. OS3.5 is likely to be largely a snapshot of a well tuned-up Workbench, but we will see more solid developments with OS4. Above is a mocked-up screenshot of OS4.0 as we envision it. A short description of what it does follows – but remember that this is speculation, personal choice and imaginary software, the reality is likely to be a little different – but note that pOS has already adopted most of these ideas.

- High Quality Display: Let's face it, that old 4 colour Workbench looks so dull you could bottle it and sell it as sleeping pills. A computer environment needs to look good if you are using it every day, so this GUI is significantly tweaked, and configurable. The two extra gadgets in the windows are from the PowerWB utility, allowing icon/text and show all/icons only toggling, a simple but ergonomically brilliant addition. NewIcons 5 solve icon colour problems inherent in things like Magic Workbench, and work closely with the Filetyping system, see below.
- Custom icon hotlists: Extra menu bars can be placed around the screen. The fully integrated Workbench wide drag and drop system makes these very easy to configure – you just select New Icon Bar from the menu, name it and drop icons on it to install their software in the hotlist for easy access without desktop clutter.
- Custom Popup menus: Menus are entirely user configurable, allowing anything to be launched direct from a menu option. The can be left in an entirely AmigaOS 3.1 like top strap, launched like a Windows 95 start menu, or can appear as a pop-up under the mouse pointer wherever you press the right mouse button. A menu strip could be set up to activate CLI or ARexx commands to give an Opus like operating environment, and using the facility to tear off menu options and leave them on screen you could even make an Opus Magellan like tool bar.
- Improved Drag and Drop: Under OS4.0 everything you can select with a pointer be it text in a word processor, a brush in a paint package or a program icon on Workbench can be dragged into any other appropriate screen and dropped. A picture can be dragged out of PPaint and dropped into a texturemap requester in Imagine, a piece of text can be dropped onto a printmanager icon for immediate printing and so on.
- Filetyping: Mixing the concepts of datatypes and tooltypes, Amiga OS4.0 comes with a filetyping system. Any file can be examined by the filetype system, which looks for clues in the file to what it actually is, and then if necessary is able to decode it. When you double click on an HTML file, the OS automatically recognises its filetype and launches HTMLGuide, the replacement for AmigaGuide. A Filetype management utility, Boing, sits on the Workbench in the form of an AppIcon. If any Icon is dropped on this information on the filetype is returned and several possible operations on the Icon are offered. Boing also handles the preferences for any files launched by double clicking on them.

- Executive like improved task scheduling
- Built in TCP/IP Stack
- Remote network device mounting
- Retargetable Graphics and Sound
- Turboprint or similar built in.
- And a lot more features than space allows!


AmigaOS 4.0 Chip-1520 Fast-14.410 CPU: 030/50MHz Tasks: 35
Ram Disk
System3.0
files
HD
Dopus
Shell
ShapeShifter
PCTask
CUCD18
CUCD18 100% full, 0K free, 632M
InitCD
Important!
CDsupport
CUCD
PPaint
Trapped3
Foundation
files
icons
wbpic
Trashcan
Prefs
System
Devs
Expansion
Tools
Utilities
WBStartup
Trashcan
DOS
Storage
Boing: (MpegA) Mars
Boing
Net Apps
Connect
AmIRC
Voyager
YAM
Custom Menu
Lightwave
VistaPro
PPaint
Amiga Shell
CD Player
Communication
Graphics
Publishing
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Games
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System Prefs
Screens
Commodities
Edit Menu...
Find...
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A5000
68030-50
A5000

▶ **More upcoming talent. The A5000 Amiga clone from DCE and Power Computing.**

the InsideOut and the phase 5 PowerUp project, and that is that they both work as dual processor systems. phase 5 are promoting the concept of multithreaded, modular code, which is designed in such a way as different modules can be run on different processors.

While some have argued that this is not the optimal approach for the current generation of PowerUp cards, it certainly makes sense in a system developing towards multiprocessing.

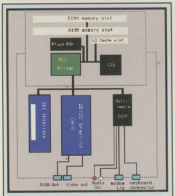
Two heads better than one

If you have an operating system which only runs on slow CPUs, you have two choices. You can either re-write the OS and jump to a newer, faster CPU, or you can keep it on the slower CPU and add a second, faster CPU to handle the harder bits.

This is exactly what phase5 have done with the PowerUP cards, partially because converting the OS would be a very large task, but partly because they want to follow that approach to multiprocessing anyway. After all, even if the OS does get converted to PPC, if you have more than one processor in your computer, you can get them to share the load and perform any tasks faster.

The interface electronics of the PowerUP system is not limited to strapping a single PPC chip to the 680x0 chip on which Amiga OS runs, it is actually capable of supporting several PowerPC CPUs at the same time, for even more power. phase 5 have already talked about a super PowerUP board with four high speed PowerPC CPUs working together to achieve speeds way beyond any of the current competition.

With the advent of InsideOut, this working together becomes more of an issue for the Siamese system, too. For example, just as Cloanto have released replacement plug in libraries for Personal Paint which run on PowerUp for greater speeds, they could release similar ones for InsideOut systems connected to PPC platforms, PCs and of course Alphas.



Another popular option for the Amiga is a set top box version, which is basically a computer with limited functionality and some specific hardware.
The PCI bridging opens up a realm of cheap componentry already designed for PCI interfacing. With the previously described CPU module, an STB capable of supplying all your internet and interactive TV needs can be contrsructed quickly and easily.

Similarly, software such as Lightwave could be written in a modular manner which would allow a 680x0 version of the code to do all the light work, while the heavy duty rendering work is automatically farmed out to a plug in rendering module running on the faster processor. Multiprocessing like this also makes conversion of the OS a less painful task. It is widely estimated that converting AmigaOS to another CPU represents at least a year's work for a fairly sizeable team.

There is no reason why on a multiprocessing system, the OS should not be ported chunk by chunk, with some bits running on the 680x0 while others run on the second processor. This seems to be the approach that HiQ are taking as they plan to get more and more of the Amiga OS running on the Alpha, until it runs 100% natively.

Multiple choice OS

The problem with all this is it starts to sound like the whole Amiga market is fragmenting into dozens of incompatible pieces.

Fortunately it is not quite like that. Amiga Inc are going to be more of a standards body than a manufacturer in the Commodore mold, and to this end have declared that the Boing Ball symbol will be a sign that any computer that bears it will run Amiga software and represents a compliance to the OS.

This simplifies matters considerably. If, at the end of the day, the A\box doesn't bear the Boing Ball, the argument as to whether it is a genuine next generation Amiga or just an independant computer influenced by the Amiga is settled; it isn't. If it does bear the mark then similarly the argument is settled, and it is. Does this mean that phase 5 will have to scrap their notions of their own OS in favour of a completely compatible Amiga OS if they want the boing ball? Not necessarily.

As you probably by now know, Amiga OS 3.5 is due out later this year. This first official release from Amiga Inc. will not be anything revolutionary, it will be more about hauling OS3.1 into the modern era, and will do this in a large part through third party software which extends the functionality, appearance and convenience of what we already have. If you want a good idea of what OS3.5 will look like, then you could do worse than install the Workbench 2000 suite from CUCD 18.

As we move towards Workbench 4.0, there will hopefully be a change which will be less immediately visible but significantly more far - reaching in its final effect. This will be for the code of AmigaOS to be cleaned up, debugged and made into a more modular and portable, object oriented C core. By doing this the code becomes far easier to port to other operating systems. The second aspect of this cleaning up of the code would most likely be the implementation of a HAL.

Before you worry that Amiga OS 4.0 will make your Amiga into a raving lunatic that sings lullabies on missions to Jupiter, perhaps I should explain. A HAL (Hardware

More information:

Here are a few websites worth examining for more information.

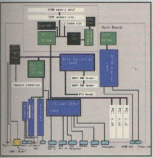
Amiga Inc./Int.: www.amiga.de
Aros project: www.aros.org
Index: www.cix.co.uk/~index
Motorola: www.mot.com
phase5: www.phase5.de
Pios: www.pios.de
Power Computing: www.powerc.com
ProDAD: www.prodad.de
Siamese: www.siamese.co.uk

Abstraction Layer) sits between any programs running on the computer and any software running on it.

Something not unlike a sort of global retarg system, this HAL allows the software to communicate properly with the hardware, whatever exactly that is. Just so long as an appropriately compatible HAL is produced, any compliant variation on the hardware will happily run any OS compliant with that HAL.

The reason why this approach to the operating system will be attractive to Amiga Inc. is because it is the most immediate solution. Even if they declare the PowerPC to be the Amiga CPU of tomorrow, they are likely to work on a 68k version of OS4.0 in this vein first. Starting from scratch straight onto PPC would be likely to take too long, and the Amiga is in dire need of updating right now. The work would not be wasted, as it would make the process of porting to the new CPU that much easier for AI. Another tempting reason would be AROS.

AROS is the Amiga Replacement Operating System. It is a project started independently by a group of enthusiastic Amiga coders during the darkest days of the buyout fiasco. Concerned that the Amiga would never be bought, the AROS team decided to do the job themselves. The work has gone well. The original aim of the project was to allow Amiga OS3.1 to become an easily portable environment which, in the case of Amiga computers never again being made, could be easily run on many hardware platforms. Now the AROS project may turn out to bear rich fruit. The AROS team has pronounced itself willing to work with AI, and if AI like what they see of the coding effort, they could find that a sizeable chunk of their work has been done for them. According to the AROS team, their work is currently about 50% done.



The CPU module could just as easily be used to construct a computer, the PCI bridge being used for the majority of data bus communications. This approach is the idea behind the CHRP platform and allows small manufacturers to put together unique hardware platforms such as the BeBox and hopefully soon the PIOS one. Of course a design like this would be just as feasible with all the CPU module parts mounted on the motherboard rather than a module

ShapeShifting

With this sort of an implementation of the Operating System, the hardware which the OS is running on becomes increasingly irrelevent. Any hardware manufacturer can produce a machine capable of achieving the boing ball mark of compatibility by ensuring an AmigaOS compatible HAL is written.

If these hardware manufacturers want a boing ball mark on a computer which uses a CPU other than a 68K, be it PC, Alpha or even Pentium, it does get a little more complex. By connecting up an InsideOut or a 68K co-processing solution of some other sort, they can ensure total compatibilty by running all the 68K code on that, but there is another option, and one Amiga users should be very familiar with – emulation. Many thousands of Amiga users run Macintosh software on their Amigas by using Shapeshifter or Fusion to emulate a Mac. Similarly PC-Task or PC-x allow people to run PC software. Why shouldn't there be a similar approach to getting Amiga binaries to run on other CPUs? In fact there already is, called 'UAE'.

Cloanto have recently picked up the PC version of UAE for release as Amiga Forever. UAE has for a long time been of limited use, but Picasso96 for UAE has changed that. Using the Picasso RTG software, Amiga screens can retarget to the PCs own graphics hardware, taking a lot of strain from the emulation. UAE has never been able to run AGA as emulating the custom chipset has simply been too much work. Picasso 96 support has moved UAE from being a painfully slow emulator of a long out of date Amiga to one capable of running all the up to date software at almost acceptable speeds. If the OS were to be ported to the Pentium, a lot more strain would be taken from the emulation, and the huge power of modern CPUs would allow the emulation to run at very good speeds indeed.

Clumsy emulation of simple moment to moment tasks such as controlling the GUI would disappear if the OS ran natively on the hardware, and software could be dynamically semicompiled on loading for maximum emulation speeds. As CPU speeds get faster, running Amiga binaries under emulation will become entirely acceptable speedwise. The PowerPC should have things even better. Apple showed the way here when they moved to PowerPC, implementing a runtime 68K emulator which sat in the OS and allowed old 68K Mac binaries to be run on PowerPC Macs like native software.

Modern Macs with ultra fast PPC 604 and PPC G3 processors do the job superbly. Although no-one is currently writing a 68K PPC Amiga emulator, or at least admitting to doing so, it is surely only a matter of time.

◀ Multi OS/Multi CPU computing courtesy of the Siamese system.

Open Amiga – the future?

Across the computer world as a whole the old paradigms are breaking down. Before, you bought a computer and the OS you got was determined largely by your hardware.

There have always been portable operating systems such as Unix and the various Linux flavours, but they have been in the realm of the computer scientist. If anyone wants to know why Bill Gates is so keen on sticking his thumb into the Internet pie, it is because he can see the curtain falling on the current model of single hardware platform, single operating system computers that have been the source of his billions. DEC's FX32 software allows DEC Alpha machines running Windows NT to run 32 bit Pentium code, often faster than a real Pentium machine can.

Today high end PowerPC Macintoshes can run SoftWindows emulation of Windows 95 at speeds real Pentiums could barely achieve a year ago. As CPUs such as the PowerPC G4 or new Alphas hit 1GHz (1000Mhz), what CPU you have is going to look a little irrelevent. People will buy whatever hardware they like and run whatever software they want. Imagine an A\box simultaneously running A\box OS, Amiga OS, Mac OS, and Windows, capably running native code for any of these platforms at high speed. Inevitably these operating systems will work together better and better, and eventually the only real choice to make is which environment offers you the most comfort, ease and power to work in.

We may not see a machine like this for ten years, but it's the way the world's going. At a time when Apple are pushing back to the old single hardware/OS provider model, the Amiga might just lead the way into the open computing platforms of the future. ■

Andrew Korn

Stop Press!

Amiga, Inc. have just announced that their official choice for the future of the Amiga platform is for it to run on dual processing 68K/PowerPC systems. For the full story on these developments, please turn to our News pages. My thanks go to Amiga International for not invalidating my entire article!

Amiga OS 3.1

OS3.1 – Official Amiga OS Upgrade

Amiga 500, Amiga 500+, Amiga 1500, Amiga 2000 Amiga 1200, Amiga 3000(T),	£ 39.95
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OS 3.1 ROM's only

Amiga 500, Amiga 500+, Amiga 1500, Amiga 2000	£ 25.95
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StormC V3.0 Base Package Non Commercial license	£119.95
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StormWIZARD V2.0 – GUI creation	£ 69.95

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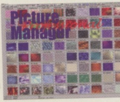

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PCx Advanced software only 80x86 PC emulation.

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OPTIONS
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SAVE GAME
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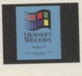
QUIT GAME



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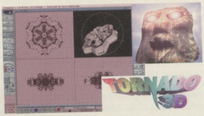

Catweasel II

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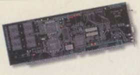
Picasso IV



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- ❍ 18 voices and digital playback
- ❍ Records in mono and stereo
- ❍ Two Midi connectors
- ❍ AHI, MIDI and Serial driver
- ❍ Mixer
- ❍ ARexx support
- ❍ Requires PicassoIV (firmware 4.1+)
- ❍ 68020 CPU or better
- ❍ OS 2.04 or better.

Concierto IV

Concierto IV	£ 99.9

Pablo IV

Video Encoder module for Picasso IV

- ❍ Output Picasso screens to VCRs, television sets and studio equipment
- ❍ S-VHS or CVBS (Composite) video modes
- ❍ Displays 640x480 and 800x600 (PAL B/G/I mode only)
- ❍ A time base corrector is required for use with a genlock
- ❍ Requires Picasso IV (firmware 4.1+)

Pablo IV	£ 69.

Paloma IV

TV module for Picasso IV

- ❍ Two video-in channels for the reception of S-VHS and VHF/UHF (aerial) signals
- ❍ Generates video images on the Amiga workbench
- ❍ All TV images are displayed in a 24-bit window
- ❍ Pictures can be saved and edited
- ❍ Captured signal can be combined with computer generated graphics
- ❍ Combines with Pablo II to produce a digital genlock.

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  (Or replace with External A1200 Keyboard case for **£179.95**)
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- ○ Z2 board

Infinitiv Kit-Z3 - £449.95
- ○ Infinitiv Tower Kit-S
- ○ Z3 board

The Video Slot Interface adaptor is required to activate the on-board Video slot on the Z2/Z3 boards. Our new design is solderless and has been tested with Picasso IV/CyberVision ScanDoubler and other cards.

Whilst other companies have been using our Z2/Z3 boards in their own Towers, please note that neither Blittersoft or Micronik will warrant any boards fitted to non-Infinitiv Towers. Proof of Infinitiv Tower ownership is required in the event of a return.

Any Infinitiv Tower using a Z2/Z3 board with an *A1200 based accelerator* will require an additional 5.25" bay (see picture)

Z3 boards require OS3.1 and will operate in Z3 mode only if a compatible A4000 CPU slot accelerator is used. Any other accelerator forces Z2 mode. Whilst every effort has been taken to give optimum compatibility, we cannot guarantee 100% compatibility with all Zorro boards and peripherals.

Additional hard drives/CD-ROMs will require extra cables.

Z2 board	Zorro II x 5, PCI x 2, ISA x 2, Video (option)	£149.95
Z3 board	Zorro III x 5, PCI x 2, ISA x 2, Video (option), SCSI-II, A4000 CPU slot	£299.95

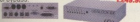
Individual Component Parts

Infinitiv Tower + Keyboard interface	£ 99.95	Infinitiv uprated PSU	£ 49.95
Infinitiv 3.5" "Snap-on" bay	£ 9.95	Infinitiv 5.25" "Snap-on" bay	£ 29.95
PCMCIA Angle Adaptor	£ 24.95	Infinitiv Video Slot Interface Z2	£ 39.95
Power Adaptor (Non-Zorro Towers)	£ 5.95	Infinitiv Video Slot Interface Z3	£ 39.95
External A1200 Keyboard case*	£ 39.95	Windows 95 Keyboard	£ 14.95
Audio Slot Bezel (2 x Phono)	£ 14.95	1.76Mb Floppy drive (internal)	£ 54.95
CD-ROM Bezel	£ 4.95	IDE cable, 2.5" to 2 x 3.5"	£ 14.95
IDE cable, 2.5" to 2.5" + 3.5"	£ 14.95	Front bezel (Fit 3.5" device in 5.25" bay)	£ 14.95

Genlock/DigiPen

MG10 Genlock
Supports VHS, VHS-C, Video-8 formats with precise settings of contrast, brightness and colour. Invert functions (i.e. Keyhole effects) and soft fading. **£169.95**

MG25 Genlock
All the functions of the MG-10 plus RGB Monitor switch, separate RGB colour setting, S-VHS, Video-8, Hi-8 and Alpha-Channel bypass. **£249.95**



BX Genlock
All the functions of the MG-25 plus Picture-in-Picture, Stand-by, External device control bus and keypad and infra-red control support **£349.95**

Infra-red remote control	£ 49.95
Keypad (100 keys)	£ 79.95

DigiPens

DigiPen 606 (15.24 x 15.24 cm)	£ 89.95
DigiPen 906 (22.86 x 15.24 cm)	£109.95
DigiPen 1212 (30.48 x 30.48 cm)	£129.95

A3000/4000 Tower Kits

Tower Kits for the Desktop A4000 and A3000

Metal CE Approved Tower, Zorro III slots x 7, ISA slots x 5 (6 on 3000), Video x 2, (1 on 3000). PCI version has 3 x PCI and 3 x ISA

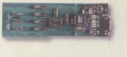
Tower 4000 PCI System (Tower and Zorro/PCI)	£329.95
Tower 4000 ISA System (Tower and Zorro/ISA)	£299.95
Zorro III/ISA/PCI/Vid (A4000 - board only)	£219.95
Zorro III/ISA/Video (A4000 - board only)	£179.95
Tower 3000 ISA System (Tower and Zorro)	£299.95
Zorro III/ISA/Video (A3000 - board only)	£179.95
Uprated PSU (state 3000 or 4000)	£ 69.95

Prelude

Prelude

Zorro II 16-bit sound card with full AHI software support.

£169.95



Memory

8 Mb SIMM 72-Pin	£ 19.95
16Mb SIMM 72-Pin	£ 34.95
32Mb SIMM 72-Pin	£ 64.95

Please note that Memory prices may fluctuate

Hard Drives

1.7 Gb IDE Hard Drive	£139.95
2.1 Gb IDE Hard Drive	£159.95
3.2 Gb IDE Hard Drive	£179.95

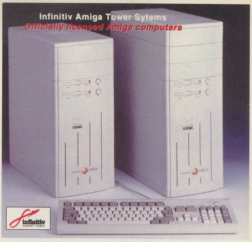
Please note that Hard drive prices may fluctuate

CD-ROM

8 Speed CD-ROM IDE	£ 49.95
16 Speed CD-ROM IDE	£ 59.95
24 Speed CD-ROM IDE	£ 69.95

Please note that CD-ROM prices may fluctuate

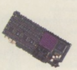
Amiga Computers


Infinitiv Amiga Tower Sytems
Officially licensed Amiga computers
Infinitiv

Infinitiv 1300	Infinitiv 1400	Infinitiv 1500
○ A1200 Motherboard ○ OS3.1 ○ 200W PSU ○ Mouse ○ External Amiga Keyboard ○ Floppy drive.	○ As per 1300 plus ○ 5 x Zorro II ○ 2 x ISA ○ 2 x PCI ○ Video option	○ As per 1300 plus ○ 5 x Zorro III ○ 1 x ISA ○ 2 x PCI ○ Video option ○ A4000 CPU slot ○ SCSI-II interface
£329.95	£429.95	£599.95

The above Infinitiv Amiga Computers come with English manuals and are fully upgradable with extra Infinitiv parts, CD-ROM / hard drives and accelerators.

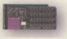
A3000/4000 Accelerators



CyberStorm PPC 180 MHz No CPU	£ 499.95
CyberStorm PPC 200 MHz No CPU	£ 599.95
CyberStorm PPC 180 MHz + 68040/25 CPU	£ 549.95
CyberStorm PPC 180 MHz + 68060/50 CPU	£ 729.95
CyberStorm PPC 200 MHz + 68040/25 CPU	£ 649.95
CyberStorm PPC 200 MHz + 68060/50 CPU	£ 829.95
CyberStorm MKIII 68060/50 MHz	£ 449.95

All accelerators have built-in Ultra-Wide SCSI and require SIMMs matching in pairs)

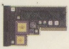
phase 5
DIGITAL PRODUCTS



POWER UP
AMIGA™ GOES POWER PC™

BLIZZARD
603e+ Power Board

A1200 Accelerators



Blizzard 603+ 160 MHz No CPU	£279.95
Blizzard 603+ 200 MHz No CPU	£369.95
Blizzard 603+ 250 MHz No CPU	£429.95
Blizzard 603+ 160 MHz + 68040/25 CPU	£319.95
Blizzard 603+ 160 MHz + 68060/50 CPU	£499.95
Blizzard 603+ 200 MHz + 68040/25 CPU	£399.95
Blizzard 603+ 200 MHz + 68060/50 CPU	£589.95
Blizzard 603+ 250 MHz + 68040/25 CPU	£479.95
Blizzard 603+ 250 MHz + 68060/50 CPU	£649.95
Blizzard 1230-IV 50 MHz 68030 CPU	£ 89.95
Blizzard 1260 50 MHz 68060 CPU	£299.95
Blizzard SCSI for Blizzard 1230 or 1260	£ 59.95

Blittersoft

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Stars of 97

Now that the dust has well and truly settled on that now distant year of 1997, it's time we paid tribute to the products that kept the Amiga moving forward through very tough times. Judging of all the categories invoked plenty of debate from the assembled team of CU Amiga experts... Wheel on the hired celebrity compere, it's time for the CU Amiga Stars of 97 Awards!

Games

Best Presentation

Nominations

OnEscapee, Myst, Shadow of the Third Moon

Winner

OnEscapee

Commended for its distinctive and highly atmospheric soundtrack and visuals which seemlessly span the intro sequence and the game itself.

Technical Achievement

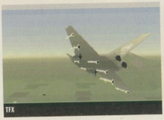
Nominations

Shadow of the Third Moon, Trapped 2, TFX

Winner

Shadow of the Third Moon

The first game to successfully adapt and expand the classic 'voxel' flight engine to accomodate a real, fast, highly playable game.



TFX

Best Gameplay

Nominations

Final Odyssey, TFX, AmiDoom

Winner

TFX

Despite a few quirks its sheer size, depth and total immersion factor secured the gameplay award for TFX.

Best Game

Nominations

Shadow of the Third Moon, Myst, OnEscapee

Winner

Myst

Not quite a unanimous decision, but in the end Myst won out for its unique blend of presentation, atmosphere and gameplay.

Myst

Hardware

Hardware Innovation

Nominations

Access, PowerUP, Siamese Ethernet

Winner

Siamese Ethernet

It's amazing no-one ever dreamed up this ingenious combination of PC and Amiga, and an Ethernet link is the icing on the cake.

Best Expansion

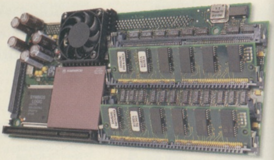
Nominations

Viper 520CD, Power Tower, CyberStorm PPC

Winner

CyberStorm PPC

phase 5's first PowerUP card was without doubt the most important hardware development of the year.



Best Add-on

Nominations

Picasso IV, Squirrel CD-R, Epson Stylus Photo

Winner

Picasso IV

Going one better than the CyberVision 64, the new Picasso also offers attractive additional expansion possibilities.

Serious Software

Best Graphics Software

Nominations

Cinema 4D 4.2, LightWave 5, Draw Studio 2

Winner

LightWave 5

One of the hardest fought categories saw a bunch of quality software get trampled underfoot by the awesome LightWave 5.

Best Creative Software

Nominations

Visual FX, Sound Probe, PageStream 3.2

Winner

Sound Probe

It's not often we get an entirely new application of this calibre, setting new standards for audio software.

Best Application

Nominations

Final Writer 97, Wordworth Office 6, Voyager NG 2.9

Winner

Final Writer 97

Worthy contenders Wordworth and Voyager couldn't fend off the highly polished style of Softwood's word processor.

Best Shareware

Nominations

STFax, IDEFix 97, OxyPatcher

Winner

OxyPatcher

Making fast Amigas go even faster, OxyPatcher won out on sheer performance over style of execution.

Best Freeware

Nominations

New Icons 4, SongPlayer, WarpOS

Winner

New Icons 4

We all want a nicer Workbench to look at, and what better place to start than a whole new set of icons?

Software Innovation Prize

Nominations

Siamese RTG, Opus Magellan, Amiga Forever

Winner

Opus Magellan

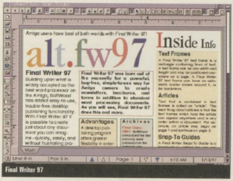
Attempting to replace the Amiga's Workbench is a tall order that Opus Magellan actually manages to pull off.

Achievement Award

Petro Tyschtschenko

For sticking with the Amiga through thick and thin.

LightWave 5



Amiga users have best of both worlds with Final Writer 97!

alt.fw97

Final Writer 97

Building upon what is widely accepted as the best word processor on the Amiga, SoftWood has added easy-to-use, trouble-free desktop publishing functionality. With Final Writer 97 it is possible to create just about any document you can imagine—quickly, easily, and without frustrating pro-

Final Writer 97 was born out of the necessity for a powerful, bug-free, simple-to-use way for Amiga owners to create newsletters, brochures, and forms in addition to standard word processing documents. As you will see, Final Writer 97 does this and more.

Advantages

A desktop publishing program offers greater flexibility in enter-

Archives

Final Copy:

Inside Info

Text Frames

A Final Writer 97 text frame is a rectangle containing lines of text. A text frame can be any width and height and may be positioned anywhere on a page. A Final Writer 97 text frame can have an automatic border drawn around it, or be borderless.

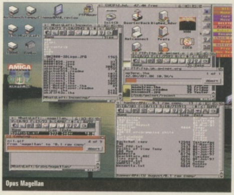
Articles

Text that is contained in text frames is called an "article". The neat thing about articles is that the text frames which hold the article can appear anywhere and in any order within a document. For example, an article may begin on page 1 and continue on page 3.

Snap-To Guides

A Final Writer Snap-To Guide is a

Final Writer 97



Opus Magellan

Latest CD Games

SHADOW OF THE 3rd MOON

3D flight-simulator featuring State of the Art graphics, sound and animation..
Highly Rated Worldwide!
It's like no other game on the Amiga.

Requires 6mb ram and at least 030 processor.
Order: CD562x £22.99

CIVILIZATION

"Build an Empire to Stand the Test of Time". Discover New Technologies - Build Wonders of the World - Determine the Fate of your People.
Rated No.2 best game ever.
Order: CD454x £12.99

ULTIMATE GLOOM

"Gloom 3" The Ultimate version of Gloom, The Amiga's answer to Doom, Brilliantly Fast 3D graphics and BLOOD like you've never seen in a game before.
Order: CD472 £14.99

SUPER SKIDMARKS +

Brand New Release! Features the best Top-Down Racing action ever...Over 40 tracks, 40 Unique vehicles: Ranging from Aircraft to Shopping Trollies.
Order: CD493 £14.99

STREET RACER

The Amiga Version of the World Famous PlayStation game. Featuring Wickedly fast graphics..

CD Version requires 4mb
Order: CD478 £14.99

DOOM 2

The Amiga Version of Doom2 is now available.Suitable for any AGA Amiga with 8mb ram, Graphic Card Enhanced. 030 or above recommended.

Order: CD585 £19.99

THEME PARK DELUXE

Newly released Amiga CD-ROM containing both ECS and AGA Versions of ThemePark. "One hell of a Great Game!"
Rated 90%+

Order: CD583 £14.99

NEMAC IV

The Ultimate 3D "doom" clone featuring stunningly fast 256colour - 3D graphics and awsome sound effects.
Rated 90%+ Worldwide.

Order: CD477 £19.99

BIG RED ADVENTURE

After the success of the PC version, The BIG RED ADVENTURE is now available on Amiga CD, featuring great high-res graphics.

Order: CD455 £19.99

FLYIN' HIGH

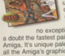
Forget those boring "flat" 3D-racing games. Flyin' High allows you to drive over hills, through tunnels, over ski-jumps and a lot more. Up to 4 Players can play simultaneously by using a 4 player Joystick-adaptor.

System-requirements:
Amiga1200/4000 6mb ram.
Order: CD440x £19.99

PINBALL BRAIN DAMAGE

Pinball Brain Damage is an exciting new AGA only Pinball simulation, featuring Super-high-res graphics!, multi ball, multi flipper and tons of other features. *Look out for the review!*
Order: CD486 £19.99

Productivity



DELUXE PAINT 5

Deluxe Paint as a product is the envy the the whole PC world, It's features and ease of use are not matched by any other graphics package either on the Amiga or PC. Deluxe Paint 5, the latest release, is no exception. Deluxe Paint 5 is without a doubt the fastest paint package available on the Amiga, It's unique palette feature supports virtually all the Amiga's graphics modes. Deluxe Paint 5 includes the most powerful yet simplest to use animation feature you could imagine. Direct support for all the Amiga's animation formats are included as well as of course the industry standard IFF picture format. Includes full printed manual.
The CD version is supplied with a free bonus CD containing Colour Fonts, Clipart, Images etc.
Order: CD499 £19.99

SOUND EFFECTS VOL:1

Over 15,000 files. Includes sound effects from all over the place, including Animals, Nature, Horror, House, Crash, Explosions etc, etc.

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BLITZ BASIC 2.1

A next generation BASIC with features borrowed from PASCAL, C and others. Program any type of software with more power than ever before. Complete with full manual. Also available on floppy disk. The Special CD version also contains the complete series of BUMs (Blitz User Manuals) and a free bonus CD containing source-code, graphics, fonts, samples etc.
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Contains 500 high quality professional clipart images, all of which are royalty free. It's supplied with a 30+ page booklet showing all the images. Every Cartoon image on this CD is 100% original.
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MIDI GOLD : VOLUME ONE

Professionally compiled collection of around 3000 MIDI files. All tracks are categorised into various directories, like: Film, Composer, Artist, Style, etc.
Great with Yamaha MU10.

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3D OBJECTS

Thousands of DXF compliant 3D objects suitable for use with either Lightwave or Imagine. All popular catagories included like : Space, Furniture, Buildings, Objects, etc, etc.
Order: CD215x £7.99

MAGIC WORKBENCH

Magic Workbench Enhancer is a stylish Amiga CD-ROM containing not only Magic Workbench but also around *10,000 new Workbench Icons, Backdrops and Desktop tools.* Enhance Workbench even more.

Order: CD187x

DESKTOP VIDEO CD VOL:2

Amiga Desktop Video CD volume 2 contains hundreds of megabytes of Video related backdrops, fonts, samples, and clip images. The CD also includes a **full version of Scala**.
Order: CD404x £9.99

WORLD OF CLIPART PLUS

World of Clipart Plus is a double CD-ROM containing **40,000** mono and colour clipart images. It includes over **100 categories** including: animals, people, vehicles/transport, food&drink, zodiac, xmas, cartoon, music, computers, technology, babies, women, men, dogs, cats, birds, office equipment, trees and dozens more.
Order: CD77x £14.99

20,000 WEB GRAPHICS

This comprehensive resource has everything you need to help you develop a professional looking web site. Includes over 7,000 animated GIFS, as well as 13,000 fast-loading buttons, flags, banners, deviders, symbols, bullets, arrows, alphabets and more, ALL ROYALTY FREE!.
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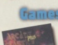
Only £2.99 each

CD32 Titles

01.Vital Light
12.Marvins Marvelous Adv.
14.Gaurdian
16.Chaos Engine
17.Alfred Chicken
19.Chuck Rock
22.John Barnes Football
23.Last Ninja 3
27.Myth
29.Now Games!
31.Total Carnage
34.Oscar & Diggers
35.Fears
37.Strip Pot (18)
39.RoadKill
43.Video Creator
44.International Karate +
50.Super League Manager
51.Bubble & Squeak
53.Naughty Ones

Please call for a complete upto date list....
Most are suitable for use on A1200's with CD-ROM drive!

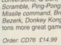
Games Collections



ARCADE CLASSICS PLUS

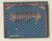
Arcade Classics Plus includes hundreds of variations of all the classic arcade games, such as *Pacman, Invaders, Tron, Galaxians , Frogger, Tempest, C64 conversions, Q-Bert, Trail Blazer, Scramble, Ping-Pong, Pengo, Missile command, Breakout, Bezerk, Donkey Kong, Tetris* and tons more great games.

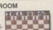
Order: CD76 £14.99



THE GAMES ROOM

The Games Room is an original compilation of Gambling games. It covers everything from Fruit Machines to Card Games, including Klondike, Poker, Solitaire, Rummy, BlackJack, and Roulette, Darts, Bingo, Pool, Checkers, Chess, Backgammon, Dominoes, Various Board Games like Monopoly and Cluedo, Mastermind, Pub Quiz's and a wealth of other Casino related games and far more...





Order: CD451 £12.99

NOTHING BUT TETRIS

Around 100 variations of the all-time classic game "Tetris". All the games are runnable from the CD.
Makes a great gift for anyone!

Order: CD451 £12.99

Latest CD Games

SIMON THE SORCEROR

"Simon the Sorcerer" is one of the Amiga's most loved graphic adventures."The animation has to be seen to be believed." CUAmiga
The voice of simon is Chris Barrie (Mr Britas).
Suitable for Amiga CD / CD32
Order: CD563 £14.99

SIMON THE SORCEROR

SixthSense Investigations is an amazing new Amiga arcade adventure, featuring 32 locations, full character dialog, 3 different worlds, many interactive characters, puzzles and more. This game sets new standards for Amiga gaming. Based on the classic style of LucasArts Graphic Adventures.

System-requirements:
Amiga1200/4000/CD32
2mb ram, 4mb Recommended.
Order: CD430 £29.99

Adult CD's

ANIME BABES SPECIAL EDITION

Thousands of high quality Manga style GIF Images. Contains scenes of nudity and sex.
Order: CD491 £19.99

ANIME BABES VOLUME ONE

Thousands of high quality Manga style GIF Images.
Order: CD191x £14.99

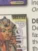
Applications

MINI OFFICE

This superb easy to use office suite is great for the home and small bus ness, It includes a Word Processor with a spell checker, Database, Spreadsheet and more.
Order: MINIOFFICE £19.99

BLITZ BASIC 2.1

A next generation BASIC with features borrowed from PASCAL, C an others. Program any type of softwa with more power than ever before. Complete with full manual. Includes full printed manuals.
Order: BLITZ £19.99



DELUXE PAINT 5

Deluxe Paint 5 is without a doubt th fastest paint package available on the Amiga. Deluxe Paint 5 includes the most powerful yet simplest to u animation feature you could imagin Includes full printed manuals.
Order: DPAINT £19.99

INTER OFFICE

Intergrated Office suite containing InterWord, InterSpread, InterBase and InterTalk. Suitable for any Ami with Workbench2 or 3.

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INTER SPREAD

Interspread supports over TEN MIL LION cells at once. Data can be re resented graphically using pie char and bar graphs etc.

Order: INTERSPREAD £5

AMI-PC LINKUP

Network your Amiga upto a PC an make use of ALL it's drives, Including: CD-ROM, Zip, Hard driv High-Density Floppy etc, etc.

Order: AMI-PC LINKUP £17.99

MOUSE-IT

Allows connection of virtualy any P mouse, Trackball or pointing devic to the Amiga. Plugs into your seria port.

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INTER BASE

Quick and easy to use, Interbase i the perfect solution when it comes Amiga databases, easily transfer data from interbase into other sup ported applications, print lables et
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AVId PROFESSIONAL

The fastest and most powerful AV player for the Amiga. Includes ver sions for A500+ / A600 / A1200 / A4000 and A5000.

Order: AVID £CALL

DIRECTORY OPUS 5.6

Over the past 7 years Directory O has become established as the m popular and most powerful directory/file manager on the Ami

Order: DOPUS £49

TURBO PRINT 6.01

The ingenios printer driver system TurboPrint prints the full colour sp trum directly from your favourite s ware package. Print at the very b quality, and at the highest speed
Order: TURBOPRINT £49

Adult CD's

ADULT SENSATION VOL:1

4000 high quality GIF Images.
Order: CD01x £7.99

ADULT SENSATION VOL: 2

4000 images, 70's images, a fe games, Animations, Adult storie Adult music and samples and m more.
Order: CD115x £7.99

ADULT SENSATION 3D

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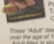

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Check this spread for some of the coming attractions for 1998. Only room for a fraction of planned games, who says the Amiga is dead? If you needed more persuading, just look at our exclusive preview of the amazing Quake. This game is going to be HUGE...

Reviews

36 Coming Attractions
38 Quake
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Quake Preview P38

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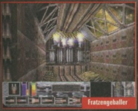
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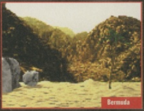
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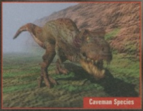
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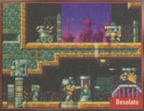
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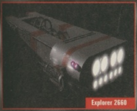
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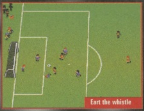
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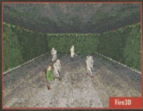
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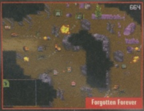
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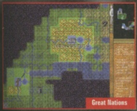
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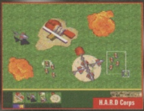
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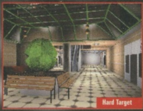
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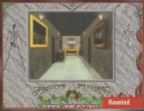
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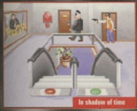
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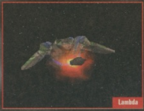
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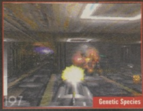
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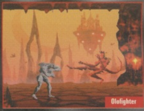
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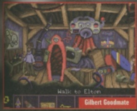
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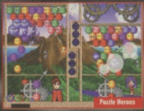
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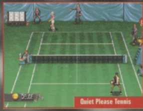
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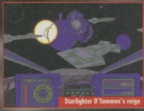

Starfighter D'Yammen's reign

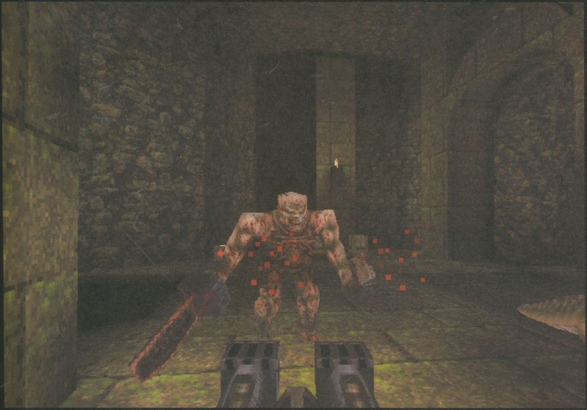
World Exclusive

Quake Amiga

It's almost upon us! Amiga Quake is about to be let out of its cage to terrorise a whole new bunch of game addicts. We've seen it. We've played it, and we've sold our soul to it...

We have seen the future of Amiga gaming, and it Quakes. Put aside all the arguments as to whether original Amiga games are more important than ports of PC titles, because this is the port to end all ports and gives the Amiga the game everyone wants. Quake is a 'Doom clone', but also far, far more. It is hugely demanding of the computer that it runs on, but ClickBOOM have tamed it to their will and made it playable on a pretty average Amiga. It is the heart of the revolution in online gaming and a chameleon which can take on a multitude of forms. Prepare yourself for the ride of your life...

Quake was born from the embers of the popularity of Doom. id Software's hit shareware release changed the face of gaming with a sense of being there that few games had come close to before, and to achieve this id threw the rulebook out of the window and wrote their game for the people with a top of the line computer rather than writing it for the lowest common denominator. Everyone wanted Doom, and as a result rushed to upgrade their PCs sufficiently to do this great new game justice. Jumping on the bandwagon, games companies released hundreds of other games to cash in on both the craze and the higher specifications of the average gamers' hardware. It was around



▲ Head to head with a chainsaw-equipped ogre. Ready for it?

this point that the Amiga started to lose the plot as a games machine.

Doom was never converted to the Amiga. Amiga users, used to easy plug and play simplicity, weren't too keen on the notion of having to upgrade their computers, and as a result the Amiga was under powered for a demanding game like Doom. Meanwhile the PC games market rode along on the wave of interest Doom had generated and impressive Doom beaters such as Hexen and the impressive true 3D Descent. However id Software were not resting on their laurels. About 16 months ago Quake appeared and revolutionised everything all over again.

Quake looked at first rather like Doom. A first person perspective shooter, set in a weird medieval / science fiction setting of castles, demons and rocket launchers, Quake expanded the Doom concept to another level. Quake is 3D. You probably thought Doom and all its offspring were 3D, but the third dimension was largely a fudge. Quake is different - play with 'mouselook' and you'll see what I mean. With this option selected, you control the movements of your character with the keys while you use the mouse to look around you. Suddenly you realise just how 3D it is, and how much it changes the playing experience. You might be walking across chamber and suddenly rockets land around you – launched by an assailant on a walkway far above you. Walking across a bridge you might chance to look down and see a vital key on an island in the river below. Another place you see the change to a true 3D world is in the enemies that face you. No longer the cardboard cut - out shooting targets of Doom, Quake introduced 3D foes of texture mapped polygons. The position of everything is well measured in the 3D environment, giving the game a fascinating sense of immersion. You can duck behind obstacles, sneak up behind enemies and even jump over oncoming rockets. From the moment the first demos appeared, the gaming world fell in love with Quake. Whilst all this was going on (and no doubt in part because of it) the Amiga games scene appeared to be on its last legs. Apart from a few final flings from the big software houses all that the future appeared to hold was badly produced cottage industry puzzle games. It was during these dark days that

How fast?

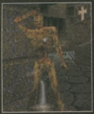
Quake needs powerful hardware. The CPU in Amigas is rather out of date compared to those used in other computers, and the graphics capability is seriously limited too, so how can Amiga Quake compete? Through serious optimisation. Amiga Quake is probably the quickest version of Quake there is.

The AGA chipset is monstrously slow compared to modern graphics cards, but when you stick to 320 by 256 pixels, AGA is perfectly sufficient. If your CPU is still not up to the task then you can shrink the screen size, use double pixels or skip lines to get a speed up. With a graphics card, things get better, with lovely 16 bit colour Quake playing at reasonable speeds.

Although Amiga Quake does support very high resolutions, they are too slow to get a lot of pleasure out at the moment. 640 by 400 is OK, but beyond that and we enter jerk-o-matic territory. To put this in perspective, to get similar performance out of a PC with similar graphics hardware, requires a significantly faster CPU. According to our tests, a 50MHz 68060 ran as fast as a Cyrix P150 and even the AGA version ran 320 by 200, 8 bit mode as fast as a 486DX4 100MHz with a graphics card comparable to a Picasso 2. Impressive stuff!

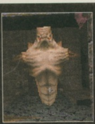
Next up is the PPC version of Quake. Currently only in the early stages of development, it is difficult to predict how fast it will be. There is already a version of Quake on the PPC, MacQuake. This is unlikely to be a good guide to speed as AmigaQuake is a considerably more optimised piece of work, and if the PPC version follows suit it will thoroughly outshine MacQuake.

Some big scary monsters



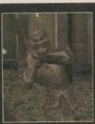
Zombie

Being dead can really get on your nerves after a while. This lot take it out on the living by flicking their rotting flesh in your face. This is what happens when you can't stop picking your nose.



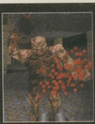
Scrag

Your everyday maggot goes through a wriggly worm stage, eating its way through festering corpses before learning to fly, but these ones have mastered the art rather earlier than normal.



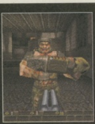
Knight

They've got giant broadswords and plenty of amour, but that's not much protection against a decent firearm. What they lack in battlefield technology they make up for in persistence.



Ogre

These dangerously dumb creatures could probably crush you underfoot, but just to make sure, they keep themselves armed with a blood-soaked chainsaw, so keep your distance.

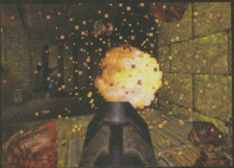


Grunt

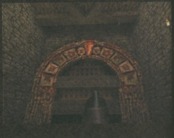
Some better armed and attired than others, this trigger-happy bunch are a bit handy with their plasma guns, but leave them alone long enough and they'll probably end up killing each other.

QuakeGL

There is a version of Quake on the PC which is specifically written to operate on the Voodoo 3DFX or one of a small number of other 3D graphics cards under the OpenGL 3D graphics API. This version is a major improvement on the original, with 16 bit colour, lighting effect and 3D acceleration. With one of these cards, Quake looks far better and goes far faster. There is no hardware to compare yet, but ClickBOOM have given us 16 bit support anyway, and it looks amazing. You'll need a graphics card to get it, but it barely slows the game down if you do. Of course with the 3D Permedia 2 based graphics cards for PPC coming from phase 5, this is all likely to change. ClickBOOM are definately interested in supporting it, and with hardware like that it won't be the Amiga Quake player playing catch up!



▲With the bigger guns, you start seeing this sort of thing more and more often. This is known as "gibbing" an opponent.



▲Frightened yet? With atmospheric dungeon surroundings like this you soon will be...

the source code for Quake was leaked via a hacker's BBS. The Amiga being a computer with such an enthusiastic user base and numbering such a high proportion of coders amongst them, it was inevitable that several people would try their hand at porting Quake to the Amiga. The project might at first have seemed pointless, after all hadn't the Amiga been deemed to slow to run a conversion of Doom? There was a difference. Commercial wisdom in the Amiga market still largely followed the old pre Doom paradigm of writing your program to run well on the most basic Amiga reasonable. A few noble attempts to go beyond this such as Alien Breed 3D II from Team 17 were not successes financially, and the games that companies wanted to write would run well on such a small minority of computers that it would not be worth the cost of development. To a few enthusiastic hackers, the commercial viability of the project was not an issue. It did not matter to them that there were only a small number of Amiga users who could run their conversion at any remotely acceptable speed, they did it anyway. When id Software learned about these ports, they were not happy. Threats were made, and distribution of the illegal versions largely came to a stop. Luckily for us, appearances were not quite as they seemed. Canadian software company ClickBOOM, previously known for their rather tasty 2D beat 'em up Capital Punishment, saw the promise of this port, and started asking questions. Although they were heavily committed already on their conversion to the Amiga of the biggest selling CD-ROM game of all time, Myst, they felt that Quake was too good to let go, and entered negotiations with id Software for the rights to produce the Amiga conversion officially. Finally, at the end of last year, they announced that they had secured those rights. The really good news was that development of that early port of Quake had continued. Behind the scenes, the game had undergone continuous improvement, and by the time the deal was signed, sealed and delivered, ClickBOOM were almost ready to launch a highly optimised Amiga version of the game, polished and professional enough to satisfy their own standards as well of those of id Software.

If the old Doom shoot-the-bad-guys-pick-up-the-keys gameplay is not satisfying enough for you, be reassured to know that many of the biggest Quake heads out there would agree with you. Quake is a one player game of lasting involvement and a gloriously brooding atmosphere, but it is more. Quake is a programmable game engine which allows configurability far, far beyond anything any other game offers, and if you have any doubts about that, just check out the panel on total conversions.

The opinion has often been voiced that the Amiga is not up to the technical demands of Quake. After all this is a game that is generally considered hard work for a high end PC, so how can it be even remotely playable on an Amiga? The answer is through a lot of work. The original code has not simply been converted straight over from the PC to the Amiga, a lot of the routines used to generate the graphics have been painstakingly converted into machine code and optimised for the Amiga. According to ClickBOOM's Alexander Petrovic, "This is the

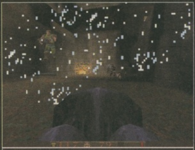
More than just a game... total conversions

Quake is much more than it appears. id Software didn't so much create a great game in a box but create a gaming engine which others may utilise. The simplest aspect of this is the 'console' which is a CLI-like interface to the game engine which can be pulled down at any time during the game. Here commands can be issued, variables can be set, and sequences of commands can be programmed and bound to a single key press.

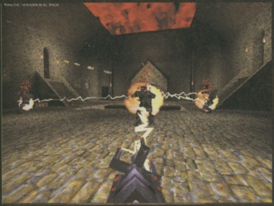
The console is the interface to what's possible with Quake's engine. Not only is it possible to bring in new levels to the game but new textures, new 3D models and almost any behaviour we may design for the new graphics via 'Quake C'. Quake C is a portable code that Quake compiles and allows programming the game engine in a deep level. The simplest examples add new weapons and special effects to the game, but fully autonomous computer controled deathmatch players, known as 'bots' are also possible.

Because of this unparalleled control over the game engine, Quake has been spectacularly popular for third party add-ons to the game. These range from simple new levels, weapons patches to so-called 'total conversions' which modify the game to such an extent that Quake becomes a new game. Yes, this is possible and even fully commercial Quake add-ons are available such as the brilliant Malice and X-Men: the Apocalypse. The great news for Amiga Quake is that it retains the inherent programmability of Quake on any other platform. Since Quake C is totally portable, these add-ons will work for Quake on the Amiga. This fact alone has brought more fresh gaming potential to the Amiga than it's seen for a very long time.

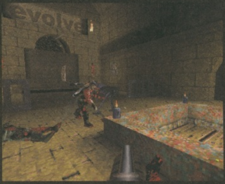
Of course, the installers for commercial 'total conversions' are PC specific so Amiga software publishers will need to license the products and repackage them with Amiga friendly installers. This doesn't apply to the wealth of free add-ons however. They are available in the thriving Quake 'scene' such as web and FTP sites on the Internet. All you needs is an Amiga archiver to extract PC style 'zip' archives and you're away, or you can just get them off future CU Amiga cover CDs already extracted.



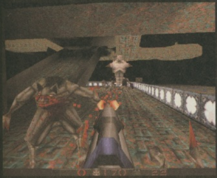
▲ In the superb PainKeep Deathmatch add-on, we see the AirFist foiling these chaps launching Rockets at me



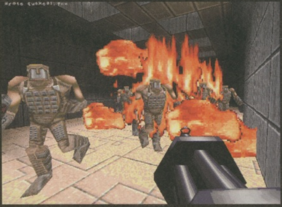
▲ My favourite weapon, the Chain Lightning Gun. Fry you buggers fry!



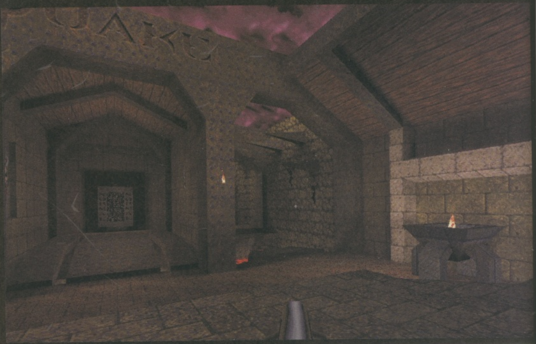
▲ Cool autonomous entities like this auto-sentry are possible in Quake C



▲The official first Quake mission pack is superb with it's new levels, weapons and monsters.

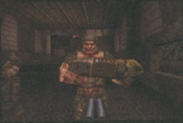


▲ The commercial Malice conversion is unspeakably amazing and it's based on Quake's engine



No, this isn't the intro sequence, this is the in game graphics - but you will need to wait for PPC Amiga Quake to get it to run like this at decent speeds.

fastest you can get on a 680x0 – guaranteed." We wouldn't like to say that something simply cannot be improved on, but one thing is for certain – when we first got the game up and running in the office, we were amazed. If this isn't the fastest, it is certainly damn fast. You're not going to want to go for larger screens unless you have a seriously powerful Amiga, but the game plays, and plays well. Even without a graphics card, a fast Amiga can play full screen Quake at speeds so reasonable that you never find yourself missing the action, never get caught out by opponents in a multi player game using faster machines, and only on the few most complex scenes notice the display jerking.



▲You call that double barrelled peashooter a gun? That's not a gun, THIS is a gun!

Quake is the biggest game to hit the Amiga in ages. It is the first title for a while that has made the rest of the gaming world look at the Amiga and take it seriously, with news of the Amiga version from ClickBOOM doing the circuit of gaming websites on the Net as well as many print magazines. Quake is a major undertaking for ClickBOOM, both as a software development and financially, and is going to be pivotal to the future of Amiga games. The world is watching, and the success or otherwise of Quake is going to be a major determining factor in whether the Amiga games revival comes off or not. ClickBOOM are well aware that the average gamer is going to have to upgrade if they want to get the best out of Quake – but then, wasn't that always the case?

Network Quake

The best thing about Quake is probably the fact that it can be played over a network, either a local network as simple as a couple of computers connected together with a null modem cable all the way up to Internet play, enabling people from all over the world to compete with each other. Running around the dizzying medieval world of Quake in a mad dash to be first for the best weapons so that you can blow seven types of hell out of your acquaintances is a highly addictive experience, as anyone who works in an office with a network is likely to know. Soon you will be yelling insults to each other via the messaging system, forming pacts against the evil lurkers and getting in practise on your own in your spare time. How long will it be before the first Amiga-only Quake clans appear?

The fantastic multiplayer experience of Quake via local networks or the Internet is unsurpassed. However the networking was enhanced in a free new version of Quake specifically for Internet play known as QuakeWorld. This multiplayer-only version of Quake optimised the network gaming techniques for the slower, high latency Internet. It also introduced clients downloading levels, custom player texture 'skins' and even Quake C modifications and 3D models. Imagine connecting to a server and your QuakeWorld downloads the levels, models and game patches as required so the weapons change, the players look individually different and the whole game looks and sounds different. QuakeWorld made that a reality and the good news is that ClickBOOM are intent on converting that too.

▲ Imagine logging on to a server to discover you have explosive shotgun shells. Whee!

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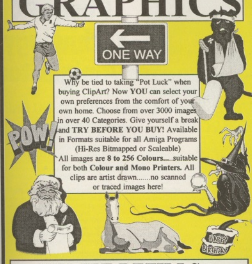

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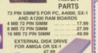

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POWER UP YOUR AMIGA...

*A further dimension is being added to Amigas with our new PowerPC based **BLIZZARD POWER BOARDS** for A1200, A1200 based Tower Systems and A1500/2000 systems along with the new **CYBERSTORM PPC** for A3000/4000 systems. You'll now be able to benefit from performance many times beyond the speed of the fastest 680x0 based boards.*

Designed as upgrades for existing systems, **Power Boards** incorporate innovative dual processor technology where a fast PowerPC RISC processor is combined with a 68k CPU, dynamically sharing memory and system busses.

While the original AmigaOS 3.x continues to run on the 68K CPU, supporting existing applications to provide backward compatibility, the PowerPC CPU is backed by comprehensive PPC Libraries which provide the functionality to integrate PowerPC into an Amiga multitasking environment.

Software developers can easily optimise their programs, step by step, porting single tasks to PowerPC code, which then run in parallel with 68k tasks. Leading Amiga software vendors are preparing ported or optimised versions of their software packages already. It is anticipated that a large quantity of software products supporting the PowerPC will be available soon.

Power Boards will be delivered with a comprehensive suite of utilities, including the PPC library, as well as tools for creative users. Among them is a Public Domain GNU C compiler for PowerPC (including sourcecode), many demo programs and utilities with sourcecode. In addition to this software, free developer support is available via FTP site.

Last but not least, a PowerPC optimised version of CyberGraphX V3 with RISC optimised CyberGL/3D plus MPEG functions and libraries is included (along with a special GGX driver to support the AGA chipset) with full and comprehensive documentation.

	Blizzard 603e PowerBoard	Blizzard 603e+ PowerBoard	Blizzard 2604 PowerBoard	Cyberstorm PPC
PowerPC CPU	603e	603e	604e	604e
Clock Speed	160-250MHz	160-250MHz	150-200MHz	150-200MHz
Companion CPU	68030 50MHz	68040/68060 25-50MHz	68040/68060 25-50MHz	68040/68060 25-50MHz
Est. PPC Performance	@ 250MHz	@ 250MHz	@ 200MHz	@ 200MHz
MIPS	Approx. 280*	Approx. 280*	Approx. 350*	Approx. 350*
SpecFP95	Approx. 3.5	Approx. 3.5	Approx. 7.1	Approx. 7.1
Memory Option	Max. 128Mb	Max. 128Mb	Max. 128Mb	Max. 128Mb
SIMM Sockets	2	2	4	4
SCSI On Board	Fast SCSI-II	Fast SCSI-II	Ultra Wide	Ultra Wide
Amiga Compatibility	A1200(T)	A1200(T)	A1500/2000	A3000/4000(T)
Est. Availability	DEC '97	DEC '97	Summer '97	Summer '97

Blizzard 603e Power Board - A1200(T)

The new Blizzard 603e Power Board is an inexpensive Power Up Accelerator for A1200 system owners who already have a board with a socketed full 50MHz 68030+MMU processor (these CPUs have a gold finish to the top surface) eg.50MHz Blizzard 1230-II, III, IV or similar. Featuring a 160-250MHz PowerPC 603e RISC CPU, the board has a socket for the 50MHz 68030, expansion capabilities of up to 128Mb high speed memory and built in SCSI-II controller.

Imagine the performance from your A1200 with this low cost board!

Blizzard 603e+ Power Board - A1200(T)

The Blizzard 603e+ Power Board is the highest spec Power Up Accelerator for A1200 systems. Featuring a 250MHz PowerPC 603e RISC CPU, the board has a socket for a companion 68040 or 68060 CPU, expansion capabilities up to 128Mb of high speed memory and built in SCSI-II controller. This board is ideally suited to those owners who already use an accelerator with either a 68040 or 68060 CPU (ie. Blizzard 1240T/ERC or Blizzard 1260 owners or their equivalents)

If you want the BEST from YOUR Amiga A1200 - this is it!

Blizzard 2604 Power Board - A1500/2000

If you own either an A1500 or A2000 you can now take advantage of PowerPC technology with this 604e CPU RISC based board which has a socket for a companion 68040 or 68060 CPU, expansion capabilities up to 128Mb of high speed 64-Bit memory, built in Ultra-Wide SCSI controller and a high performance expansion slot for expansions such as the CyberVision PPC. This board is ideal for owners of accelerators with 68040 or 68060 processors such as the Blizzard 2040 or Blizzard 2060 owners (or their equivalents).

Want the BEST from YOUR Amiga A1500/2000? - Look no further!

CyberStorm PPC Board - A3000/4000(T)

CyberStorm PPC is the ultimate accelerator for Amiga 3000[T], 4000[T] and systems with compatible CPU slots, offer blistering 604e performance - more than 10 times faster than any 68k based accelerator on sale today! Available with clock speeds of 150, 180 and 200MHz, the companion socket for the 68k processor accepts either a 68040 or 68060 CPU. The board provides 64-bit wide extremely fast memory expansion using pairs of standard SIMMs, dynamically shared by the two CPUs. Additionally, CyberStorm PPC comes with a DMA driven Wide ULTRA SCSI controller on board offering transfer rates of up to 40Mb/sec for even the most demanding of professional applications. A 32Bit high speed expansion connector, with DMA access to the main memory, is also provided for later upgradeability.

The 200MHz version of the CyberStorm PPC provides performance of more than 350 MIPS or approximately 8.1 SPECint95 and 7.1 SPECfp95*... breathtaking speed that goes far beyond that offered by most PC systems. In the second half of the year, an advanced graphics board will become available for the CyberStorm PPC expansion slot, providing a subset of the innovative CAIPIRINHA custom chip. By having a stand alone version of the DLRP (Display List Risc Processor), this board will offer superior display capabilities through higher VRAM-based resolutions, pixel depths and speeds, as well as the potential to begin developing software supporting the functionality of the forthcoming A\BOX system.

PRICING AND AVAILABILITY:

Options with or without 68k CPUs will allow users to fit the CPU from their existing accelerator. Delivery of Power Boards is scheduled for Summer 1997 following finalisation of CE approvals. Call now for full details.

Special prices available to existing BLIZZARD & CYBERSTORM board users

Blizzard 603e/603e+ Board...	160MHz	200MHz	250MHz
with Empty 030/040/060 Socket	£269.95	£359.95	£429.95
with 68030/50MHz fitted	£302.95	£392.95	£462.95
with 68040/25MHz fitted	£305.95	£395.95	£465.95
with 68040/40MHz fitted	£331.95	£421.95	£491.95
with 68060/50MHz fitted	£466.95	£556.95	£626.95

Cyberstorm PPC 604e Board...	150MHz	180MHz	200MHz
with No Processor	£479.95	£549.95	£629.95
with 68040/25MHz fitted	£519.95	£579.95	£669.95
with 68040/40MHz fitted	£549.95	£609.95	£699.95
with 68060/50MHz fitted	£709.95	£769.95	£859.95

**Quoted performance figures are estimations based on specifications from Motorola/IBM and are relevant to the PowerPC processor only. Prices Include VAT @ 17.5%. Owners of other makes of board or those who don't already have an appropriate CPU - please call for prices.*

POWER PC TECHNOLOGY, POWER PC SPEED and POWER PC PERFORMANCE

Harwoods... always the Fastest Amiga Boards and NOW PowerPC Technology for Amigas too!

CYBER BLIZZARD SPEED

STILL THE FASTEST, NOW LOWER PRICED, NO ONE ELSE EVEN COMES CLOSE!

BRAND NEW...

CYBERVISION PPC

Estimated Availability FEB '98

HIGH END GRAPHICS CARD for...
PowerUP, CyberStorm PPC and Blizzard 2604 PowerBoards

The CyberVision PPC is a high performance graphic card which can be installed on the expansion slot of the PowerPC 604e based PowerUP Accelerators, the CyberStorm PPC and the Blizzard 2604 Power Board. The use of CyberVision PPC is highly recommended for use with the Blizzard 2604 Power Board to speed access to the ECS Chip Memory or Zorro II based graphics boards found in A1500/2000 Amigas.

Performance of CyberVision PPC benefits from the high data bandwidth achieved by direct connection to the processor bus utilising the graphics direct connector which incredibly speeds up, for example, 3D rendering/display. Breathtaking performance is enhanced not just by the ultra fast processor access into the video memory, but also the internal speed and functionality of the CyberVision PPC.

CyberVision PPC is equipped with the powerful PERMEDIA2 Graphics Controller providing outstanding 3D performance of up to 80 million textured 3D pixels/sec, with hardware accelerated rendering functions such as z-buffering, gouraud shading, fogging, blending and anti-aliasing. As the design of PERMEDIA2 hardware suits OpenGL implementation, its 3D performance can support CyberGL functionality of CyberGraphX V3 Native which is supplied with PowerUp boards. In combination with the high floating point performance of the PowerPC 604e processor, a breathtaking performance in professional 3D applications can be achieved. Additionally, the PERMEDIA2 processor supports functions such as colour space conversion, chroma keying and XY-Scaling which is used by the software MPEG decoding routines of CyberGraphX V3 Native.

- 64Bit Wide SGRAM with data throughput of up to 800Mb/sec - allows ultra fast RAMDAC to display up to...
  1280 x 1024 in true colour at 85Hz screen refresh rate and...
  1600 x 1200 in true colour at 60Hz or high colour at 85Hz.
- 4Mb or 8Mb Display Memory options

CyberVision PPC... 4Mb Display Version	**£CALL FOR LATEST NEWS**
CyberVision PPC... 8Mb Display Version	**£CALL FOR LATEST NEWS**

EASY TRAPDOOR INSTALLATION... No modification necessary. Reliable low heat output.

1260 TURBO ACCELERATOR MEMORY BOARD

A1200 TURBO ACCELERATOR and MMU/FPU
50MHz 68060 - 0Mb Standard, expandable to 64/192Mb
38.71MIPS with single sided 60/70 Nanosecond SIMM fitted.

Offers Amiga A1200 owners FULL 68060 POWER with a board that simply plugs into the trapdoor slot. Your A1200 will then operate at TWICE or even THREE TIMES THE SPEED of an '040 based upgrade and up to FIVE TIMES THE SPEED of a standard A4000! Available options such as the SCSI-IV Kit and RAM are shared with the Blizzard 1230-IV and 1260.

Blizzard 1260 Turbo 50MHz 68060 and MMU/FPU, 0Mb 32Bit Fast RAM, exp. to 64/192Mb	£319.95

LOWER PRICE!

EASY TRAPDOOR INSTALLATION... No modification necessary. Reliable low heat output.

1230-IV TURBO ACCELERATOR MEMORY BOARD

A1200 TURBO ACCELERATOR and MMU
50MHz 68030 - 0Mb Standard, expandable to 128/256Mb
9.91MIPS with 60 Nanosecond SIMM fitted.

The highest performing 68030 Accelerator available for your A1200. With its 50MHz 68030 and MMU, the 1230-IV offers BETTER PERFORMANCE at a LOWER PRICE. With a SysInfo rating of 9.91 (using a 60 n/s SIMM) you can see the 1230-IV is very fast... a performance gain of up to 500% is achieved! Via its Fast Expansion Bus, an optional SCSI-2 Controller module can easily be fitted. An industry standard SIMM socket provides for up to 128Mb of auto-configuring 32Bit Fast RAM (up to 256Mb with the SCSI-2 option using its extra SIMM socket).

Blizzard 1230-IV Turbo 50MHz 68030 and MMU, 0Mb 32Bit Fast RAM, exp. to 128/256Mb	£89.95
Fast 60 Nanosecond SIMM RAM Expansions - 32Bit, 72Pin	£Call
Motorola Maths Co-Processor - 68882 PGA type FPU, 50MHz	£39.95

LOWER PRICES!

BLIZZARD SCSI-IV KIT

SCSI-2 MODULE for 1230-IV, 1240T/ERC & 1260, & ADDITIONAL 128Mb SIMM SOCKET
(Fast SCSI-2 DMA Controller - upto 10Mb/s transfer rates with additional SIMM socket/extra RAM)

Blizzard SCSI-IV Kit	£59.95

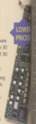
1230-IV and 1260 FEATURES

- May be disabled with simple keystroke on boot up - for full games compatibility, even badly programmed/older software
- Battery backed self re-charge Real Time Clock
- High performance expansion with full 32Bit wide DMA
- Easy trapdoor installation - no modifications required
- 1230-IV features PGA FPU socket allowing optional 50MHz 68882 FPU

CYBERVISION 64/3D

64-Bit ENGINE A2000/3000/4000 (T Series) 3D VERSION 24-Bit COLOUR ACCELERATED GRAPHICS CARD.

For all Zorro-3 and Tower System A1200s with Zorro II backplanes. The core of this great board is the VIRGE GRAPHICS CHIP from S3. With 3D capabilities, it's able to process complex 3D functions in hardware (eg. shaded & textured surfaces) with Trilinear Filtering and Shading/Fogging for super realistic Real Time 3D Rendering. When used with CyberGraphX 3D library, Cybervision 64/3D can even offer a broad range of 3D facilities for any software developer.



LOWER PRICES!

CyberVISION 64/3D... 4Mb Version	£139.95
MPEG Decoder - added to the Feature Connector to provide real time MPEG audio and video decoding at full size custom screens or, in Workbench windows (HQ display using 16/24Bit modes from CyberGraphX Workbench). Stereo audio output is provided via the supplied dedicated line output jack. Upgrade to a Cybervision 64/3D and MPEG bundle (from previous Cybervision 64) for a special low price!	£149.95
Monitor Switcher - with integrated scan line doubler. Designed to fit into the Amiga slot, this gives full automatic switchover from the standard Amiga signal to Cybervision 64/3D's output. Both cards may be fitted inside A3000/4000 models leaving three Zorro-III slots free.	£69.95

CYBERSTORM II

AMIGA 68060 ACCELERATOR

Cyberstorm II is an ultra powerful graphics accelerator. When you fit a Cyberstorm II 68060 Accelerator to YOUR A3000, A3000T, A4000 or A4000T you can for example, render a graphic with Imagine 2.0 software in just 2.4 minutes! Compare that with 10.34 minutes on a standard A4000 '040/25!

With no jumpers, both Cyberstorm II models are fully plug and play and, A4000 users even have the option of a SCSI-2 Module if they wish (A3000s already have SCSI built in).

- Up to 128Mb of standard SIMMs can be installed and you can even transfer the 72Pin SIMMs from your Amiga A4000 straight onto your new Cyberstorm.
- Optional SCSI-2 Module
- If your budget currently only covers the cost of Cyberstorm II 68040ERC, you can always upgrade later to the full 68060 processor for the extra power!

LOWER PRICES!

Cyberstorm II 68060/50 50MHz 68060 - 0Mb, Expandable to 128Mb LAST FEW AVAILABLE...	£389.95
Cyberstorm II SCSI-2 Module	£69.95
Cyberstorm II SIMM RAM Expansions (Please call for a range of SIMM prices)	£Call

CYBERSTORM III

AMIGA 68060 ACCELERATOR

NEW Cyberstorm III is the latest high end 68060 Accelerator Board for YOUR A3000, A3000T, A4000 or A4000T (or system with compatible slot). Features a high performance 68060 processor at 50MHz clock speed, a memory expansion option for up to 128Mb of ultra fast 64Bit memory, a Wide-Ultra-SCSI controller on board and an expansion slot for high performance expansions such as the CyberVision PPC.

- Up to 68Mb/sec sustained memory transfer rate - ideal for applications demanding the use of large amounts of data. Memory design of the Cyberstorm III is 50% faster than the Cyberstorm II resulting in real world application performance increases of up to 25%!
- Wide-Ultra-SCSI Controller onboard
- Expansion up to 128Mb of ultra fast 64Bit memory
- Expansion slot for high performance expansions - eg. CyberVision PPC etc,

BRAND NEW...

Cyberstorm III 68060/50 50MHz 68060 - 0Mb, Expandable to 128Mb	£469.95
Cyberstorm III RAM Expansions (Please call for a range of RAM prices)	£Call

MOTOROLA MOTIVATED

Blizzard and Cyberstorm products use MOTOROLA 680X0 and PowerPC series processors. They run **WITHIN** the electrical timing specification laid down by Motorola to prevent any possible overheating/reliability problems. So, when you pay for a 50MHz CPU for example, that's exactly what you get... not a 40, 33 or even a 25MHz CPU "clocked" to 50MHz! Look out for the **MOTOROLA MOTIVATED** logo - your guarantee of our commitment to quality and reliability - **BEWARE** of "clocked" CPUs! T/ERC and ERC processors used on selected boards are recycled and vigorously tested 68040 CPUs operating at 40MHz - an excellent guaranteed and competitively priced alternative.

What the Magazines think...

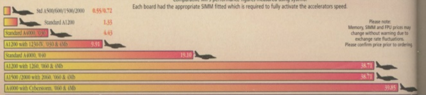
Blizzard products have consistently achieved the highest magazine accolades and awards!

Amiga Shopper *"...1260 is destined to become the ultimate object of desire for A1200 owners."* - **91% STAR BUY Award**
Amiga Computing *"...If you want the fastest Amiga in the World, get this board"* - **92% BLUE CHIP Rating**
Amiga Format *"...Ride on the fastest A1200 in the World..."* - **95% GOLD Rating**

OUR RANGE HAS WON MORE AWARDS THAN ANY OTHER

JUST COMPARE THE PERFORMANCE FIGURES FOR YOURSELF!

Comparative MIPS performance figures measured using SysInfo.
Each board had the appropriate SIMM fitted which is required to fully activate the accelerators speed.



THE PERFORMANCE OF OUR NEW POWER UP BOARDS WITH POWER PC PROCESSORS!

Please note:
Memory, SIMM and FPU prices may change without warning due to exchange rate fluctuations.
Please confirm price prior to ordering.

COMPATIBLE WITH ANY STANDARD VIDEO SIGNAL AND S-VHS!

Pro-GRAB™ S-VHS 24RT Plus

NEW LOWER PRICES!

The revolutionary S-VHS **ProGrab™ 24RT Plus** with Teletext is not only the best way to get crisp colour video images into your Amiga, from either live broadcasts or taped recordings, it also costs less than any of its rivals. This real time PAL/SECAM/NTSC* 24-Bit colour frame grabber/digitiser has slashed the price of image grabbing on the Amiga and, at the same time, has received rave reviews for its ease of use and excellent quality results. ProGrab™ has earned honours from just about every Amiga magazine and Video magazines too! And... with ProGrab™ you needn't be an expert in Amiga Video Technology, a simple 3 stage operation ensures the right results... **Real Time, after time.**

Take a signal from TV with SCART output

Use either Satellite signals or VCR output of TV or Video, including S-VHS

Grab images with your Camcorder including S-VHS

STAGE 1

Select any video source with S-VHS or composite output. This could be your camcorder, TV with SCART output, satellite receiver, domestic VCR/player or standard TV signal passing through your VCR/player... the choice is yours.

STAGE 2

With ProGrab's software, select an image you wish to capture using the on screen preview window and Grab (because the hardware grabs frames in real time, there's no need for a freeze frame facility on the source device). Once grabbed, simply download and view the full image on your Amiga screen. ProGrab also includes a Teletext viewing and capturing facility from either TV or satellite sources.

STAGE 3

Use the 'grabbed' image with your favourite word processor, DTP or graphics package. ProGrab really does make it that simple!

ProGrab™ 24RT Plus...

- Supports all recent Amigas and is also fully AGA Chipset compatible. You can render images in any Workbench screen mode resolution including HAM8 mode (Amiga RAM permitting).
- Saves and Loads images in IFF/ILBM, IFF/ILBM24, JPEG, BMP, PCX, and TARGA file formats. ProGrab saves animations as Anim5 files and animations with sound (requires PCMCIA interface and separate sound sampler) as Anim5 + 8SVX files. A range of image processing effects, palette computing routines (AGA only) and dithering methods are featured in ProGrab Version 2.6.x. Photogenics fully supports ProGrab with a custom 'Loader' to enable grabs directly from within the program - this direct input method will save YOU more time when handling large images.
- Software has built in mono and colour animation facilities. Number of frames is dependant on Amiga RAM.
- Release 2.6.x software now includes...
  Additional Teletext Facilities - with either terrestrial or satellite TV signals.
  Larger Preview Window - double resolution and four times area of previous ProGrab software.
  International Support - now compatible with composite PAL, SECAM and NTSC - straight from the box.
  Larger Preview Window - double resolution and four times area of previous ProGrab software.

ProGrab™ 24RT Plus costs just £99.95 **LOWER PRICE!**
and is supplied with just about everything you'll need◆...

- ProGrab™ 24RT Plus Digitiser
- Latest ProGrab Version 2.6.x Software
- Mains Power Supply Unit
- Parallel Port Connecting Cable
- User Manual
- Input sockets for Composite and S-VHS.

◆ A video source cable will be required to match your own equipment - ask us for details.

** Standard ProGrab hardware is PAL/SECAM/NTSC compatible. Interlace mode options are available with PAL & SECAM only.*

ProGrab supports any Amiga with Kickstart 2.04 or later and a minimum of 1.5Mb free RAM.

PCMCIA Interface - A600/1200

ProGrab's optional PCMCIA Interface includes the latest version software and extends performance for serious or professional users - offering the following benefits...

- Faster downloading times (up to FIVE times quicker)
- Improved animation speeds of up to 11fps (mono) and 3.5fps (colour)
- Saving of animations direct to your Amiga's hard drive
- Freeing of your Amiga's parallel port for use by a printer or other peripheral
- Sound sampling and animation capabilities (separate sound sampler required, see right)

PCMCIA Interface **LOWER PRICE!** £29.95

Stereo Sound Sampler

Fantastic high quality 8-Bit Sound Sampler specifically designed for use with the ProGrab 24RT digitiser (PCMCIA Interface is also required).

This Hi-Fi sampler features the same 30MHz A/D convertor used in the ProGrab, maximum frequency is therefore only limited by your Amiga hardware.

Featuring a band width of 40Hz to 20KHz, quality is higher than standard samplers.

Hi-Fi Stereo Sampler £24.95

ProTel™ Terrestrial/Satellite Teletext Decoders

Amiga or PC add ons for grabbing terrestrial or satellite TV Teletext pages which don't need a dedicated Teletext TV/Video to operate... required signal is simply the output taken from a standard VCR or a TV that provides a suitable video out signal. Once information has been downloaded, ProTel allows you to view pages instantly... no more waiting whilst your TV searches!

ProTel™ for Amiga

Stand alone unit designed to match your Amiga allowing files to be exported as ASCII Text for use in your word processor or saved as IFF graphics for DTP presentations.

ProTel™ Amiga Teletext Decoder £44.95

ProTel™ for PC **NEW**

ProTel PC Teletext Decoder - internal ISA PC card.

- Friendly software
- Capture speeds of 1000 pages in 2 mins
- Background tasking • Easy configuration
- Save page files (ASCII, BMP, ProTel formats)
- Native 32Bit Windows '95 application
- Requires 386DX PC and 8Mb RAM (12Mb Rec.), Windows '95/3.1 or Workgroup 3.11, VGA display, Mouse and 1 free 8/16Bit ISA slot - MINIMUM
- PAL and SECAM

ProTel™ PC Teletext Decoder £29.95

Camcorder User commented... "If you're looking for a high resolution 24 bit digitiser then, at this price, ProGrab 24RT represents great value for money."

ProGrab™ - Voted as The Best Video Hardware *product for the Amiga. Especially pleasing because the award comes from Amiga Shopper magazine's readers... Satisfied Customers!*

ProGrab™ - Amiga Format 93% Gold Rating *and comments like... "ProGrab 24RT Plus is quite simply the digitiser to get", "Incredible value for money - no other digitiser offers so much for so little" and "Offers far more features than any other digitiser near the same price"*

ProGrab™ - Amiga Shopper 95% STAR Buy *and remarks like... "Sharp, crisp and faithful to the original colours, we were mightily impressed" and... "Highly Recommended. Whether you are a Videographer or a Graphic Artist, look to the ProGrab 24RT Plus. It's a winner" Hi-Fi Stereo Sampler - Amiga Shopper 92%* STAR Buy April 1997.

CU Amiga said ProGrab™ is... "Just the job for beginners and semi-professionals on a tight budget" and, "very hard to beat. For the money, nothing can touch it"

THE APPLE ALTERNATIVE

IF YOU'VE REALLY GOT TO BUY A NEW SYSTEM TODAY...
the next best thing to your Amiga could be an **Apple Macintosh**.

BUT WHY MACINTOSH?

- Just like your Amiga, all Macs are Motorola based but have had the advantage of PowerPC RISC CPUs for some time... remember, even Pentium PCs in Windows™ systems are still merely CISC processors!
- Like the Amiga, Macs were designed from the outset to be an easy to use system with their windowing environment fully integrated - not bolted on later. And... Macs not only outperform other PC systems, but have recently become very competitively priced too.

- **Software**: there are over 1800 titles specifically written for PowerPC Macs alone, plus 1000s from pre PowerPC days which are still compatible. Industry standards such as Word, Pagestream, Word Perfect, FileMaker Pro, Excel, Quark XPress, Photoshop and many others have been developed for Macs.
- **Creativity**: Apple still lead the creative world - With 80% market share in colour publishing, most web sites being authored with Macs and post production video editing dominated by the Macintosh - you can see the advantage. ***The magazine you are reading now was published using Macs!***
- **Internet and Communications**: all Macs are Internet Ready - many include built in modems and fax facilities etc. Standards like Netscape & Internet Internet Explorer mean the Net is easily accessed.

- **Connectivity and Expandability**: all Macs have built in networking and external SCSI connections - adding printers, drives, cameras, scanners etc. really is plug & play!

- **Education and Edutainment**: Macs offer you the advantage of all the latest software from the likes of Dorling Kindersley, Microsoft etc. to help with the whole family's learning skills.
- **Multimedia**: Apple is the World's Number 1 Multimedia PC Vendor!

- **Recreation and Games**: Some of the top selling games are available on the Macintosh these include: Ultimate Doom, MYST, Dark Forces, Rebel Assault II, Descent, Full Throttle and many more!

WANT ONE?

Well, if you really want more performance without paying the earth - and you want it now... contact Harwoods - it may be easier than you think, especially with our finance facilities catering for both business and personal users *(subject to status)*.

Why not call and see a range of Apple Products as well as an extensive range of peripherals, accessories and software - our staff will be pleased to assist in your enquiries about Macintosh systems.

Apple Authorised Reseller & Service Provider

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We welcome all major credit/debit cards with NO TRANSACTION SURCHARGES.

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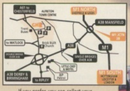
Please include your Name, Address and preferably daytime and/or evening phone or fax number with your requirements. If using your debit/credit card include its number and valid from/expiry dates (also issue number with Switch cards). Please make cheques (allow 7 days clearance), Drafts or P.O.s payable to... Gordon Harwood Computers Limited.

GH PRICES...
All UK and EC customers - VAT is included at the standard rate of 17.5% to all prices. UK overseas Armed Forces Personnel may be exempt VAT - please ask for details.

DELIVERY...
We offer prompt shipment with fully insured express delivery options throughout the UK, Europe and Worldwide at a modest cost. If ordering by mail, please call to confirm the appropriate delivery charges.

GH WARRANTY...
Manufacturers' standard warranties apply or, ask about GH's comprehensive extended options which are always recommended for professional users to minimise costly down time - details available on request.

ALL PRICES INCLUDE VAT
...and are shown for personal users only. Business users please ask for VAT Exclusive prices.



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PLEASE CALL TO CONFIRM AVAILABILITY BEFORE MAKING A LONG JOURNEY TO VISIT US.

THE PERFORMANCE OF OUR NEW POWER UP BOARDS WITH POWER PC PROCESSORS!

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GH 15TH ANNIVERSARY
1982-1997

We've been providing Commodore products since 1982 and today supply a range of 100% Motorola based systems including Blizzard and Cyberstorm along with video products and other peripherals...

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Mobile Warfare

■ **Price: £14.99** ■ **Publisher: Applause** ■ **Distributor: Islona ✆ 0500 131486**

Dune 2 style real-time wargaming returns to the Amiga? Not exactly. We take a look at a bizarre cross between Command and Conquer, Red Alert and... a board game.

Flick through the pages of one of the plethora of PC gaming mags currently hogging the shelf space at your local newsagent and you won't fail to notice that real-time wargaming is one of the genres of the moment. Spawned by the enormous popularity of Command and Conquer, every software company and their respective canine companions appear to be producing top down scrolling real-time war games.

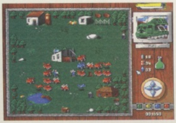
Inevitably those intrepid Amiga games programmers are getting in on the act too, with some tasty looking hats being thrown into the ring by The World Foundry, Ablaze Entertainment, Charm Design and others. Superficially, Mobile Warfare would appear to belong amongst their number, but a few moments play shows you that appearances can be deceiving. This 'top-down, real-time, scrolling wargame' is top-down and a wargame, but scrolling and real-time it ain't.

Mobile Warfare allows you to play out a campaign or play custom conflicts. In the campaign setting, you play a sequence of battles which start out as a small "police action" by your UN squadron in Romania and end up playing out a bizarre James Bond style mad dictator story line. Custom conflicts pit you against the computer in a training session where you set the parameters.

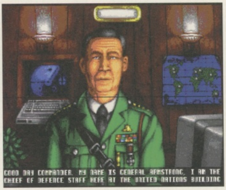
Singles screen action

The battles take place on a single screen. You are given a small complement of troops and some money. In some screens you've a barracks where you can buy extra forces.

Money can also be spent purchasing air strikes or, if you have a spy unit, bribing opposing forces to change sides. The range of units available to you changes from mission to mission, which gives a nice sense of progression. Units vary from the simple infantry man through special forces units, tanks, missile launchers to Harrier attack jets.

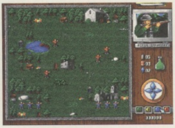


▲ Tanks, planes, missile launchers... you don't scare me!



GOOD DAY COMMANDER. MY NAME IS GENERAL ARMSTRONG, I AM THE CHIEF OF DEFENCE STAFF HERE AT THE UNITED NATIONS BUILDING

▲ Your mission, should you choose to accept it, is to wear a rubber Reagan mask.



▲ Come on then – if you think your hard enough!

The game is played on a turn by turn basis. Each unit has a certain number of moves which can be expended during your turn phase. Moving onto a square occupied by an enemy initiates an attack, in which the opposing units exchange blows. To add a certain degree of complexity and technique to the proceedings, each unit is better at coping with some types of opponent than others, so that a missile weapon is more effective against a tank than a trooper.

During your turn phase you can also spend as much of your cash reserves as you like on air strikes. Not just limited to bombing, you can also at times deploy paratroopers, drop medical supplies or fire a cruise missile which destroys anything it hits.

There are four types of special unit. The spy mentioned earlier is joined by a saboteur who can disable enemy vehicles, a nurse who can heal wounded soldiers and a mechanic who can repair damage to vehicles. Unfortunately, beyond this there isn't much difference in units beyond their relative speed and attack and defence strengths. Although at later levels you do get aircraft, they behave like ground troops even as far as having to fly around obstacles such as trees.

Once you have got over the shock of what seems to be a stunningly underpowered C&C clone, you start to realise that this is a fundamentally different sort of game and the parallel is unfair. Mobile Warfare is about planning out your strategies, figuring out how many moves bring you into conflict with the foe and using this to develop your strategy. It is more like Risk or one of the many similar warfare board games than it is like C&C.

Mission impossible

Mobile Warfare grows on you after the first couple of games. There is definitely the basis of an interesting puzzle game in here.

Alas, a few more games in and you realise it is let down by that all important aspect of any strategy/puzzle game, balance. The learning curve of the game is thrown a loop by the occasional impossibly hard missions, one of which comes rather early, while in many later missions an imbalance of play can make things far to easy.

Mobile Warfare is a game that is likely to give you a few hours of fun, but it is a long way from being state of the art. It is a good notion with a lot of work put in it, but one which is ultimately let down by dated presentation and weaknesses in the level designs that are so critical to this sort of game. It's a cheap game at £15, so I guess you don't expect more than a few hours of amusement before you put it aside. To that aim, it succeeds. ■

Andrew Korn

MOBILE WARFARE

■ Workbench version	2.0	Graphics	60%
■ Number of disks	2	Sound	70%
■ RAM	1.5Mb	Lastability	74%
■ Hard disk installable	Yes	Playability	69%

OVERALL

Would probably have got a good review a year ago.

68

Pinball Brain Damage

■ **Price: £19.99** ■ **Supplier: Epic Marketing © 01793 432176**

That deaf, dumb and blind kid Jason Compton goes on a flipping frenzy...

Computer games are funny things. They seem to serve two related yet opposite purposes. They can offer experiences we'd never come near in real life – taking aim at a hostile MIG, exploring far-off lands with only a sword at your side, or blasting off into outer space. Or they can offer experiences we could just as easily have if we walked around the block. Pinball sims fall solidly into the latter case.

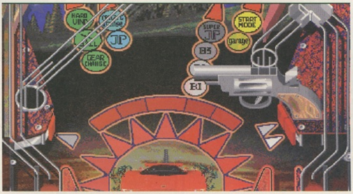
Sure, it keeps you in the house more, but there are all sorts of good arguments for things like pinball sims. You can play all you want for no additional charge, there's nobody to be embarrassed by, and you can really tilt the machine without getting in trouble. The Amiga has a fine tradition with pinball, and this latest Eastern European entry looks to add new tricks to the equation.

There are really two things that need to be evaluated when you're talking about pinball games: the quality of the pinball engine itself (does the game play reasonably like you might expect pinball to in the real world?) and the design of the tables (is this the sort of game you might shell out for and enjoy playing?)

Pre-configurable

The game engine itself brings a couple of newer notions to the fore. You can configure the ball action in a pre-game menu. On some of the settings, the ball is far livelier than you might expect. It's not as clear as the game suggests though, as to how this handicaps or assists you. It's really more a question of how you like playing than making the game easier or tougher.

More interesting is the "super high-res" mode. Most pinball games stretch themselves across several screens, meaning you typically see no more than 50% of the pinball table at any one time. PBD has the ability to give you nearly the entire table on the screen at one time, giving you a more realistic ability to plan your shots. (The size of the now customary message board at the top of the screen remains unchanged). This super-high res mode can be toggled on the fly and does have its drawbacks – it's flickery, and since the proportions are preserved it takes up a fairly narrow strip of the screen so you may feel cramped, particularly if you switch in the middle of a game.



◀ Sharper detail and enhanced gameplay is the order of the day.

▲ Is PBD a game you'd shell out for and enjoy playing?

It's a different way to play, that's for sure. I recommend you give it a real chance. Your initial reaction will probably be negative, especially if you've played a lot of computer pinball and are used to the "old way" of doing things. But you may discover the detail, despite flicker, is sharper and enhances your gameplay. The flippers have a good kick to them. On the other hand, the bumpers aren't as wild as many real-world pinball machines can get. The bumpers don't play a huge role, so it's a minor point.

The pinball engine isn't as rudimentary as the one from, say, Pinball Dreams. But I found that in what claims to be the most real-world ball action mode, the ball did not behave as it should. On one of the tables there's a corkscrew ramp, and the ball can get stuck on it. Give it a tilt forward shove and it rockets up the ramp in a way totally unlike a real ball would. You might feel this is more of a design than an engine concern but it's a problem all the same.

What can I say about the design? First let me point out that there are only two tables in Pinball Brain Damage – at least two too few for the price, if previous pinball titles are to be our guide. The first, Hypervolution, is another piece of evidence in a long-standing suspicion of mine: pinball games, real or simulated, based around cars are never any fun. This one is plain, it's very difficult to do something interesting (and half the time when you do you're unrewarded), and the music is awful. The other, Magnetic Whirlpool, is substantially more interesting, better accompanied by music and FX, but is over-designed.

Party time

I offer as perhaps the ultimate pinball sim table 'Party Land' from Pinball Fantasies. That table is fun, whimsical, and has just enough things to do to build progressive rewards that you don't get bored. Magnetic Whirlpool has so many layers and ramps and loops that it's nearly impossible to keep track of what you're supposed to be doing. Just because the digital media means we don't have to actually build the things doesn't mean the game is more fun if you throw tons of ramps into it. On top of all this, there are only the two bottom flippers – no extra action higher up on the table. This is weak, no two ways about it.

I'll probably play Magnetic Whirlpool again from time to time despite its shortcomings. Hypervolution will be ignored. I can't endorse Pinball Brain Damage, despite its "super high-res" innovation, when there are other, superior classics out there. ■

Jason Compton

PINBALL BRAIN DAMAGE

■ Workbench version......3	Graphics....... 85%
■ Number of disks..........5	Sound....... 75%
■ RAM.......2Mb	Lastability....... 50%
■ Hard disk installable ...Yes	Playability....... 50%

OVERALL

A few new tricks but the older dogs are still tops.

65%

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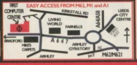

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100 Sheets Epson 720dpi	£13
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500 Sheet HP Bright White	£11

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Bulk DSDD			
10x	£3.50	100x	£27
30x	£10	200x	£50
50x	£15	500x	£115
Branded DSDD			
10x	£5	100x	£42
30x	£14	200x	£77
50x	£22	500x	£176
Bulk DSHD			
10x	£4	100x	£30
30x	£11	200x	£56
50x	£17	500x	£130
Branded DSHD			
10x	£6	100x	£45
30x	£16	200x	£83
50x	£24	500x	£190

500 Disk Labels	£7
1000 Disk Labels	£10

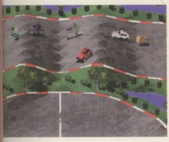
Ultimate Super Skidmarks

■ **Price: £14.95** ■ **Developer: Acid**
■ **Supplier: Islona © 01793 432 176**

Like something you stepped in that just won't be shaken off, Skidmarks just won't go away no matter what you do.

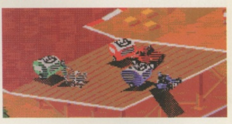
Unlike that slop on your shoe, Skidmarks was actually very good once. It would be stretching the truth to say it's still he classic game it was when it first arrived ll those years ago, but it does still have a ertain charm all the same.

This one is on CD and seems to be ppealing to the Skidmarks completist. You et a few alternative versions of the game to run, which come with different sound effects, silly vehicles (fish, water skier, tank, helicopter etc.) and... well that's about it really. OK, so you do get a healthy 24 tracks to choose from, which isn't to be sniffed at. Even so, I find it hard to get enthusiastic about yet another release of the game, and that's coming from a self confessed Super Sprint addict with a life-long passion for top-down racing games.



This presents a bit of a problem when it comes to scoring it. It's certainly the most complete and accessible version of the game, running direct from the CD with no problems at all. It hasn't actually degraded or gone sour since we last played it, but time moves on and standards change. Although it has the hallmarks of a classic game, like multi-player split screen modes, speed, humour, flexibility and so on, the core gameplay is now starting to look quite dated.

You could compare it to Micro Machines, which recently fared well with its PlayStation conversion, and it would stand up quite well against it if you'd never played Skidmarks. However, having seen and played it in a number of slightly different incarnations over the years, I've really had my fill.



▲ Take your caravan on an alternative motoring holiday, towed by a go-kart...

◀ ... or how about speeding round the tracks in the form of a water skier?

On the other hand, if by some freak of fate you've still to sample its slippery delights, maybe it's time you did. Now can we call an end to this, unless we're going to get a proper, whole, new Skidmarks 2? ■

Tony Horgan

Graphics	Sound	Lastability	Playability
77%	40%	70%	71%

■ Workbench version	3+
■ Number of disks	CD
■ RAM	2Mb
■ Hard disk installable	Yes

70%

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Tips Central

Another page crammed full of hints and cheats for all you crazy game freakz!! Along with our resident Tips Guru, Sjur Mathisen, doing his Adventure Helpline thang that he does so well.

Mobile Warfare

Only just been released has this little baby, and we have already managed to get hold of some Level Codes for you to get your teeth into... give these a whirl:

L3 – BLOOD BATH
L5 – CLEANSING FIRE
L7 – SCORCHED EARTH
L9 – THUNDER STRIKE
L11 – LIGHTNING RAID
L13 – BLIZZARD STORM
L15 – DEATH OR GLORY

Also if you try entering in these following codes you will improve your chances immensely:

KITCHENER
MONEYBAGS
ADVANCING

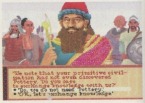
and if you want all 3 of the above then type in:

LEGION

which by my reckoning makes you pretty much invincible.

Civilisation

Here's how to design your own worlds using DPaint:
Load into DPaint the file from Civilisation directory called 'CIVMAP.lbm'. You'll find a map of earth in the corner and save this elsewhere. You can now draw your own world using the following colour sequence:
Light green – Grassland, Light blue – Jungle, Dark blue – Oceans, Brown – Plains, Purple – Mountains, White – Artic, Dark green – Forest, Medium blue – River, Yellow – Desert, Red – Hills, Grey – Tundra.



"We note that your primitive civilization has not even discovered Pottery. Do you care to exchange knowledge with us?"
• 'No, we do not need Pottery.'
• 'OK, let's exchange knowledge.'

Alien Breed 3D

0 1 2 4 5 6
AMMO 026
ENERGY 049

A cheat that'll give you extra ammunition at the start of all the levels:
The first eight letters of the code deal with your health, your weapons and the level. The next eight deal with the ammo. Change the password, leaving the first eight letters, but altering the rest to **'M'**. This will give you heaps more gear to use... Isn't life a blast!
Example:
Level 6 password –
POKKNMPLGNNLPOF
Becomes –
POKKNMPLMMMMMMMM

Ultimate Soccer Manager

Don't worry if you've got a whole bunch of players with no cash. Help is now close at hand and you can get loads of wonga! All you need to do is:
Go to the fax machine, look at the transfer list and sell the player at the bottom of the list using Fast Sell. On-screen appears a highlighted space with no name. Go to Fast Sell and sell as many times as you like. Your money will now go higher every time.

Zeewolf

An oldie but a goodie this one, and here is all of the level codes to make your job just a little easier...

REQUIN
WOLFRAM
FUUMOON
JMARGUS
STAG
KRAKEN
STATION
GBULL
STATIPAUSE
DOITNOW
SHIPDECK
GLOBOFF
BEHAVE
SHADOW
MAXFUEL
REPLAY

... Have fun now!

Slamtilt Pinball

Here's a five ball cheat mode for you and some hidden message codes as well...

Five ball:
Enter **'LONGPLAY'** on any table at the beginning as it is scrolling. You will get a confirmation message telling you the cheat is in

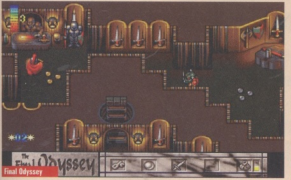
For messages type in:
BARRY, CHEAT, COW, DANIEL, IAIN, KLAUS, KOTTEN, STEWART, WHIPLASH

You need help

If you would like some help on any game – or you have some tips that you'd like to share with your fellow readers – then please write to us at Tips Central at the following address, remembering to mark your envelope Adventure or Arcade accordingly:

**Tips Central,
CU Amiga Magazine,
37-39 Millharbour,
Isle of Dogs.
London E14 9TZ**

Adventure Helpline



Final Odyssey

Final Odyssey

Monkey Island 2

I'm stuck on MI2. I've got onto Dinky Island and onto the stage where you have to make a voodoo doll of Le Chuck. I've got the little Le Chuck lookalike doll and 3 of the ingredients, all except for something of the head. Please tell me this and anything else to complete the voodoo doll. Can you also tell me how to open those drawers in the room with the broken grog machine?

Dean Croft

The five things you need to squeeze into the juju bag is the doll, the underwear, the beard, a used hankie and a skull. Now you have 3 items, but as a service to other pirates sailing the seas around Monkey Island I'll give a quick guide on how to pickup all of them. In the first aid room pick up the skull. Next, in the room filled with boxes, you open them and take the voodoo doll.

There might be more stuff of interest in these rooms, but I'll only mention the things needed to make the doll here. When you bump into Le Chuck give him a hankie and you should have enough fluid to make plenty of dolls. Now head for the room with the broken grog machine and the drawers that don't have to be opened. Use the helium tank with the 2 surgical gloves and balloon. Use the coin return and a coin will drop out. When Le Chuck enters he'll bend down to pick it up.

When he does, take his underwear. And now... Go to the elevator and enter it. The 3 balloons you now have will make you light enough to go up. Wait for Le Chuck to enter before you use the lever to go up. Le Chuck's beard should get stuck, while you should no longer be. Congratulations on finishing the game by the way. You still have a thing or two to do, but I have faith in you since you've made it this far.

Hero's Quest

Can you help me with the old Sierra game Hero's Quest? I've selected the thief-character, and now I want to access the Thieves Guild. I think it's in the cellar of the bar, but I can't open the trapdoor because of this ugly guy guarding it. He keeps asking for the password, but I don't have it. Where do I find it?

James Major, Edinburgh

To get the password simply step outside the bar. Talk to the two thieves that should be hanging out in the alley, and show them the thief sign when they ask for it. I hope you know what that is? If not, my advice would be not talking to them, unless you want to wake up the next morning with your face in the mud that is. I won't tell you how to find it by the way.

It's not too difficult, and to spoil the game for you would be a bad thing. What I would advise you to do, is to add 5 points to Magic and Parry, and 10 points to Strength and Weapons right at the beginning where you decide to be a thief.

Monkey Island 2

Final Odyssey

In level one of Final Odyssey I can't find enough money to buy the thing I need to release any of the girls. Also I haven't found the sword the trapped guy told me to bring him. Where is it?

Maggy Jones, Hartlepool

Congratulations on purchasing the game first of all. The folks at Vulcan are starting to release some really good stuff now. Well, back to business.

'The thing' as you called it is an orb, and it's expensive as you have figured out. A generally good piece of advice for this game is that you should explore every room carefully. Try every teleporter and every door, then turn a switch and try them all again.

Now to your problems. On the screen where you can buy the orbs there is a teleporter. It moves you to the room that seems unaccessable on the same screen. Now you have another path to explore. Read all the scrolls you come over and you should get some hints telling you the combination in which to turn the switches on the "where you buy orbs-screen".

Just to help you out I'd guess the combination is Down, Up, Down, Down, Up, and Up again, but then again I'm just guessing. When you've turned the switches go to the screen on the right. Here you go up and over to the right again.

There should be a door closed by a force field there. Figure out a way to remove it, and you should make it to the treasure room. The sword you're looking for is in the graveyard. Where's the graveyard? It has a scroll on the wall saying so, but you'll have to free one of the girls first to find it. Good luck in your quest!

Future Wars

I've managed to find a way into the Medieval Monastery in Future Wars, but can't get out again. I've found the transporter beam in the middle of the courtyard, but can't get it to work. Please help!

Tony Jennings, Brighton

The exit is in the cellar and not the white circle in the courtyard. To get out, go to the room to the west and take the cup. Go to the wine cellar and operate the cup on a barrel. Bring the wine to the east door where you give it to the Father Superior.

Examine the drunk monk to find something you can use on the furniture. This should give you another interesting object to use on a different barrel when you get back to the wine cellar.

TurboCalc 5

■ **Price: £69.99** ■ **Supplier: Weird Science** ✆ **0116 246 3800** ■ **http://www.weirdscience.co.uk**

Flexibility at a reasonable price is what TurboCalc aims to provide. Here's a look at the latest incarnation.

Spreadsheets are perhaps the most intimidating member of the traditional "productivity triad" (word processor, database, spreadsheet). Beyond knowing that they're simply good for business in some nebulous number crunching way, many users are content to avoid them – which is a shame, because a good spreadsheet is tremendously flexible not just for tabulating profits and losses, but for anything that might involve numbers and text.

You can use one as a glorified calculator, or implement intricate systems. On the Amiga, we get two choices – TurboCalc, now in its fifth revision, and the less frequently updated but more upscale Final Calc from Softwood.

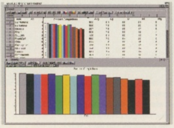
This incarnation of TurboCalc ships like all of them have since V2.1 – on CD-ROM, with no printed documentation but a lengthy online AmigaGuide manual. The manual was the first indication that all might not be roses in this update – a number of pages still refer to "TurboCalc 4", I found at least one broken link, and the help system itself did not launch properly from within the program.

Turbocalc Superstar

Version 4, reviewed last year and awarded the CU Amiga Superstar, involved a major facelift of the program, greatly enhanced GUI control including pop-up menus, and expanded the program's charting capabilities. What V5 brings to the table is a bit less dramatic, although much of it is quite welcome.

Several sub-menus and functions have been streamlined, using a more intuitive interface than before. Import and Export of file formats is now done with a window listing your choices rather than cluttering up the toolbar menu with TurboCalc's supported standards. Interaction with charts has similarly been cleaned up considerably. Of particular note to those who might use a spreadsheet as part of their day job, TC's Excel handling has been updated to handle the new formats. (My experience indicates that you should still steer clear of Excel "workbooks", however.)

The single best new feature has got to be the HTML export. Now that more and more of us are online, it's only reasonable that a larger segment of the market is interested in getting their facts and figures on the net in a convenient form. TurboCalc 5 will take a sheet or region and pack it nicely into an HTML table for you. The conversion is effective but a bit on the rough side – you get a big HTML table, which means that if you have labels that might not look best in a plain cell, you'll need to go into the resulting HTML code with your favourite editor and make changes. However, it's a very good start, and nobody expects TC to double as a fully-fledged HTML creation utility.



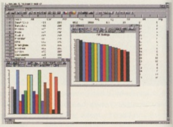
▲ **TurboCalc graphs can be shown in windows (bottom) or objects belonging to a sheet.**

The manual does a good job of bringing upgrading users up to speed no matter what version you are coming from – so if you've fallen behind (say for instance you have never upgraded your Magic pack TC until now) you won't be left out in the cold. And as the numerous TurboCalc 2-era example files indicate, the program doesn't tend to make major changes which invalidate your old data files.

Not just a pretty face

To the developer's credit, each version of TurboCalc has come not just with features to pretty up the interface but core improvements as well – new cell functions and formulas to give you more and better data processing power, more ARexx commands to integrate it with other applications or automatic processes. It is not at all inconceivable that you could use TurboCalc as a part of a cash register/inventory management system all run out of your Amiga, or to keep track of your professional time on the Amiga as a contractor – graphics, music and video pros take note!

But while TurboCalc gets marginally better in the complexity department with this release, and the addition of HTML export will doubtless save many a headache, TurboCalc has not made any major leaps in functionality for years. I was hoping for some fundamental functionality that TurboCalc lacks but you can find in Final Calc and counterparts on other platforms. An example: in its present form, TurboCalc is wonderfully equipped to keep a tabulation of various costs of inputs, manufacturing, and storage for a factory.



▲ **TurcoCalc may be the most colorful spreadsheet on record.**

But it is not capable of answering a question like "What is the best combination of inputs and quantity of manufacture, taking storage costs into account, to maximise my profits?" FinalCalc and PC/Mac spreadsheets have capability in this area that TurboCalc lacks. True, TurboCalc is at a different price point and perhaps the market will not bear linear equation solving for £50, but for a full version number upgrade, I expected some sort of major functional leap.

TurboCalc is still the solid performer it was a year ago. Keeping close (although not totally up to date) pace with Excel's file format is a major plus. This release is a bit rough around the edges though, and I think we expect a little more from what's labelled as a major upgrade.■

Jason Compton

TURBOCALC 5

System Requirements: OS 2.0+, CD-ROM, 1Meg memory Systems: All

Ease of use..........90%
Intuitive menus make up for lack of printed documentation.

Performance..........87%
Still solid, but the envelope still has a lot of give.

Value for money..........80%
The program's well priced, but this is V5 and it's time to expect more.

OVERALL
Dependable and thorough, but "V5" is a misnomer.

86%

WebFTP

■ Price: US$30 (about £19) ■ Supplier: Finale Development ✆ (001) 203 235 7518 ■ http://www.finale-dev.com

Getting sick of website maintenance? Finale Development reckon they have a solution.

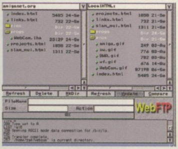
Computers were invented and cultivated to make our lives easier. At least that's the short version of the evolution of technology. What you miss with such a simple definition is the reality that computers usually make one thing simpler, then three things more complicated, until someone else goes and makes one of those three new things simpler except now he's made five things more difficult, and so on.

Take websites. Websites can be a wonderfully efficient way to share interesting information with loads of people simultaneously. Companies can reach customers cheaply, showing off their latest products. Programs and source code can be made available for download and explication 24 hours per day. You don't have to leave the house to go see someone's independent art exhibit. And so on.

Updating

The thing is that these websites are a collection of tons of files sitting on a server somewhere, and if you're a good webmaster you keep these files up to date – adding new relevant links, deleting old outdated links, putting up a graphic of the band you just discovered you like, getting rid of that stupid GIF animation because people complained it's slow to download and ugly to look at. Managing all these files can be a headache.

Most websites are located on a remote machine – your ISP, for example. Similarly, most people opt to use local tools for creating websites. More likely than not, you'll use an Amiga based text editor to build your HTML code than a Unix editor, and if you've got custom HTML creation code on the Amiga, all the more reason to stick with it. To get your files to the ISP you'll need to FTP them over. FTP clients abound. But what about an FTP client dedicated just to website maintenance? That's the idea behind WebFTP. It won't fetch the latest from Aminet for you, but it works by comparing the files in a specified remote directory to the files in a directory on your hard drive, where you would keep the website when you're working on it. Anything it sees that is new or different, it updates. Neat idea, isn't it?



▶ WebFTP before a connection – look at all the files to keep track of!

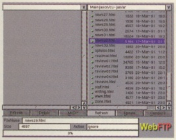
WebFTP is a compact little ditty of a utility. Its scope is limited, and it doesn't offer many ways to skin the organisational cat. Using the external configuration program, you set up the basic information about your ISP and website – your username and password, the remote directory where your ISP stores your website, and the local directory you'll be using to make changes to the site.

You can define a number of these (many times people separate their websites into directories on the various themes they cover – although WebFTP will work with subdirectories from your primary selection.) Within the WebFTP window, which will open on the Workbench, you access a pop-up menu of your choice sites. Pick one, and WebFTP will link to the site and pull in a list of files on the site presently. You can instruct WebFTP to ignore certain files and extensions (usually configuration files that you don't want a program tampering with). Using the mouse, you can opt to leave certain files alone. Then, hit the "compare" button, the program zips through and away any file that looks new over to your ISP. To keep track of the action, you can enable a "debug" window, which really just shows you the text being passed between the FTP server and the client (the plain English sort of stuff you'd encounter if you did this by hand.)

Multiple pages

WebFTP is a very straightforward approach to what is a serious organisational problem. I have managed some fairly meager websites and still got daunted by making changes while ensuring that all of the new documents made it up to the ISP – especially when you make changes to more than one page, it's very easy to lose track of what needs to be sent back to the ISP. WebFTP has some rudimentary ability to help you manage the directories on your provider but it's better to call up a full FTP client if you need serious help.

WebFTP doesn't offer a whole ton of user flexibility. The interface is static (although configurable through ClassAct's preferences program) and you cannot, for example, resize or swap the positions of the "local" and "remote" directories – you can only resize the entire windows and retain the same general proportional layout. The external configuration program is also clumsy to use and uses unfamiliar terminology (there is no "OK" or "Save" option as we're accustomed to, you get four options of which the most analogous is "Modify").



FileName news29.html
Size 4597
Action Ignore

▲ WebFTP puts a lot of power at your fingertips with a few easy to use commands.

Seeing the interface options brushed up and the configuration integrated and polished would be welcome. The documentation is also extremely minimal, and while the program is not overly complex some of the procedures need better explanation, as do some of the syntactical choices.

WebFTP has the look and feel of "commercialised shareware" because that is in effect exactly what it is. Finale Development is selling WebFTP as another entry in their Internet software line – of course, we're all really just waiting for the much promised Finale Web Cruiser. As a substitute of course this is much less exciting but it is quite practical. ■

Jason Compton

WEBFTP

System Requirements: OS 3. 68020 recommended.

Ease of use..........85%
Basically push-button. The external prefs editor is a real drag, though.

Performance..........90%
It's better than guessing and hoping.

Value for money..........75%
It's a speciality item – if you need it badly, it's worth more to you.

OVERALL
A lifesaver for harried webmasters. **83%**

PageStream 3.3

■ Price: See panel opposite ■ Supplier: LH Publishing ✆ +44 (0)1908 640 230

Now regarded as the undisputed Amiga DTP champ, PageStream attempts to better itself with yet another update.

AMIGA SUPERSTAR

People are often surprised, shocked even, that the pages of CU Amiga are designed and output using Apple Macs. "You should use Amigas!" they exclaim, but the simple fact is that when it comes to professional desktop publishing, the combination of Apple Macs and software such as QuarkXPress, Adobe Photoshop and Illustrator is the most suitable setup for the job. The main reason for this is that one way or another the Mac found itself a niche as a DTP machine in its early days, leading to its DTP software becoming the most highly developed there is.

However, thanks mainly to the continued development of PageStream, the Amiga is now looking like a very capable pro DTP option. Switch Photoshop for Photogenics and Illustrator for Draw Studio and you've completed the alternative software triangle.

Steady progress

We last looked at PageStream in the May '97 issue of CU Amiga, at which time it earned itself a storming 92% overall score. Things can only get better as they say, although this time around we have found stability to be a bit more of a problem, although that may be due to the much used and abused Amigas we use for these tests rather than any changes in the software.

You can see what's new from the list in the new features panel. You won't find many revolutionary changes or additions, but then neither Rome nor killer applications were built in a day. This is a steady upgrade that keeps it out there in front of anything else the Amiga has to offer. Sadly that's not such a difficult thing these days, since it's the only full DTP package that's still in development. All the same, it's got enough on offer that stands up well to the likes of QuarkXpress, and that's quite an achievement.

If we are to be brutally realistic, PageStream is likely to be used almost soley by amateurs and semi-professionals. Even so it will no doubt find favour with a few small professional publishers, and has the features to allow it to slip fairly easily into the big wide world of professional DTP, so long as you have a good enough Amiga system to take advantage of them.

Tea Break Time

Hank's

Fish Facts - No. 7

Monkfish

Captain Codpiece

"He'll sort 'em out for you!"

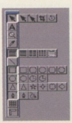
Don Goode's Travel Tips

▲ Check out the automatic text runaround on the pictures which are actually rectangular. The crossword was created with the help of the Grid tool.

Built for business

PageStream has so much on offer now that it would be impossible to go through the entire program feature by feature in the space we have. For the benefit of those new to PageStream, including those who last used V2.2, I'll have a stab at giving an overview of the package.

Unlike Wordworth or Final Writer, PageStream has been designed to tackle the toughest of publishing duties: the creation of entire books, magazines, journals and newspapers is well within its capabilities. Just about everything about your document can be configured as you like, starting with the size of pages themselves. You can either take your pick from a set of defaults (including setups for 'US Magazine' pages, CD inlays and standard A3, A4 and A5 type measurements) or specify your own dimensions. You can also select double page spreads with the

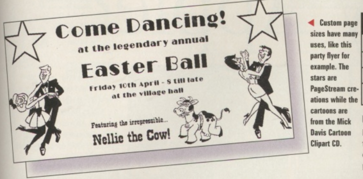


▶ The new 'flyout' toolbar offers quick and easy access to the extended tool features.

New features

The brand new features included in PageStream 3.3:

- **Fly out tools:**
- **- Rotation tool**
- **- 1, 2, & 3 Column tool**
- **- Note tool**
- **- Box shape tool**
- **- Polygon shape tool**
- **- Grid tool**
- **Define font substitution**
- **HTML help**
- **Improved Adobe Illustrator in/out filter**
- **RTF text export**
- **PageStream 2.2-style place graphics**
- **Automatic text frame "like" toggle**
- **PostScript style dash line**
- **Set type language submenu**
- **DPI calculator**
- **Improved colour palette:**
- **- Tint**
- **- From/To colour**
- **- Swatches**
- **Auto page orientation**
- **Drag duplicate**
- **Tab/Shift cycle through objects**
- **New toolbar buttons**
- **Move chapters within parent chapters**
- **Move pages from document to new chapter**
- **Set screen frequency/angle/spot for Halftone dither to non-PostScript printers**
- **Improved ordered and FS dither**
- **Mirror, Negative, Thumbnail, Crop & Reg marks, and colour seps to non-PostScript**
- **Colourise B&W/greyscale pictures**
- **Load/save printer prefs**
- **Preview colour seps on screen**
- **User editable XPD file for HP driver**
- **External picture FPOs saved with document**
- **Easier reselection of moved external pics**
- **Unsupported accent characters displayed as unaccented**
- **Total object count shown in report**
- **Configurable paper and DPI list in new ILBM XPD file**



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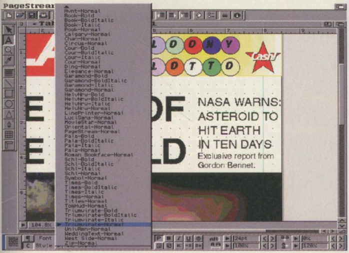
Easter Ball
Friday 10th April - 8 till late
at the village hall

Featuring the irrepressible...
Nellie the Cow!

◀ Custom page sizes have many uses, like this party flyer for example. The stars are PageStream creations while the cartoons are from the Mick Davis Cartoon Clipart CD.


PageStream
Avnt-Normal
Book-Bold
Book-BoldItalic
Book-Italic
Book-Normal
Calgary-Normal
Chan-Normal
Circus-Normal
Cour-Bold
Cour-BoldItalic
Cour-Italic
Cour-Normal
Ding-Normal
Elegance-Normal
Garamond-Bold
Garamond-BoldItalic
Garamond-Italic
Garamond-Normal
HelvNrw-Bold
HelvNrw-BoldItalic
HelvNrw-Italic
HelvNrw-Normal
LinePrinter-Normal
LuciSans-Normal
MovieStar-Normal
Oriental-Normal
PageStream-Normal
Pala-Bold
Pala-BoldItalic
Pala-Italic
Pala-Normal
Roman Bookface-Normal
Schl-Bold
Schl-BoldItalic
Schl-Italic
Schl-Normal
Symbol-Normal
Times-Bold
Times-BoldItalic
Times-Italic
Times-Normal
Titles-Normal
TomHud-Normal
Triumvirate-Bold
Triumvirate-BoldItalic
Triumvirate-Italic
Triumvirate-Normal
UnivRmn-Normal
WeddingText-Normal
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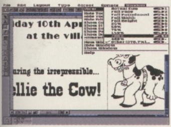
Zip-Normal
LOONY
LOTTO
Cash!
NASA WARNS:
ASTEROID TO
HIT EARTH
IN TEN DAYS
Exclusive report from
Gordon Bennet.
Font
Style
24pt
100%

▲ Using the Edit Palette (at the bottom of the screen) you can adjust every aspect of your document's objects.


File
Edit
Layout
Type
Object
Scripts
Actual Size
Full Page
Full Width
Full Height
25%
50%
75%
400%
Other (278.7%)...
Hide Window
Show Window
Help
iday 10th Apr
at the vill
uring the irrepressible...
llie the Cow!

▲ You can zoom in to a maximum of 3,000% or select one of a range of useful views from the menus.

click of button and other basic publishing standards.

The fundaments of page design in PageStream are simple. Text can be typed directly onto any part of a page or into a text box. Similarly, images can be imported, placed and scaled anywhere on the page. All pictures are given bounding boxes automatically, which makes it very easy to add a 'keyline' outline to a picture without messing about fitting pictures to boxes. Alternatively you can draw a shape in use a picture to fill it.

Text can be made to flow around any shape in a number of ways. One of PageStream's most useful features is its ability to automatically create a 'runaround path' for text to flow around the contours of a picture. PageStream intelligently guesses where the picture stops and background begins, so even though your picture is technically rectangular, the type flows around the actual graphics (see the fish and superhero on the 'Tea Break' example).

Structured line-based drawings can be created from within PageStream using the features from the toolbar, which include quick shape generators including a useful instant resizable grid, which was used to make the crossword on the Tea Break example. You can also import structured image formats which have the advantage of being almost infinitely expandable without becoming chunky.

Because print-quality 24-bit images can be enormous (an A4 size 300dpi picture would eat about 25Mb), PageStream gives you the option the keep any or all of your pictures 'external', using much lower resolution FPO previews (For Positional Only) on the displayed document. This means you don't need acres of RAM to produce high resolution documents, so long as you have enough hard drive space. When you output the document to a printer or as an EPS file, the original pictures are gathered and used for the output.

Price options

Full 3.3 package including manual	£125
PageStream 3.2 to 3.3 upgrade plus manual	£37
PageStream 3.2 to 3.3 upgrade no manual	£28
PageStream 3.1 to 3.3 plus manual	£59

User interface

Like QuarkXPress, PageStream uses a control panel for quick and easy control over the objects on your page (ie; text and pictures/structured drawings).

From here you can instantly see the attributes of text for example, such as the font, point size, alignment and so on. You can also change any of these attributes from here as an alternative to using the pull down menus. Not that you'll feel any compulsion to avoid the standard menus. They're all logically laid out and navigation around the program's various sections is never a problem.

To use the program to anything like its full potential you'll need a graphics card. A 640x256 screen isn't big enough to display the whole length of the toolbar without some auto-scroll, although the software does adjust the aspect ratio of the displayed document accordingly even if you do have to put up with a 2:1 ratio screen.

On an AGA Amiga you can use it comfortably in a Productivity mode but then you'll need to reduce the amount of colours significantly in order to stop it crawling along. Interlace is only for the foolhardy or flicker-fixed user. Even so, I know of a specific (black and white) periodical that's published with PageStream on an AGA display, but colour documents beg for a graphics card.

Conclusion

If you're serious about DTP, as opposed to fancy word processing, there's no doubt that PageStream is King of the Hill. If you haven't sampled it recently then it's time you did.

Doubtless seasoned 'streamers will find a few of the new listed features too much to resist, so either way it looks like an essential buy for most Amiga desktop publishers. ■

Tony Horgan

PAGESTREAM 3.3

System Requirements: OS 2.04+, 4Mb hard drive space, 4Mb RAM. Recommended: 68060, graphics card

Ease of use..........90%
Well arranged features and functions in a compact user interface.

Performance..........92%
Capable of knocking out documents to match anything from rival platforms or systems.

Value for money..........88%
A good price for what is a completely professional package (shouldn't have to pay extra for a JPEG loader though).

OVERALL
By far the best DTP package available for the Amiga.

91%

Why Apple?

One day we all hope to see the rebirth of the Amiga with a PowerPC processor and other new features to enable it to compete again with today's systems. Sadly though, more than 2 years since Commodore's demise, little of substance has actually happened. We've seen prototypes and heard promises... we all hope to see new Amiga developments.

If you can't wait and need more performance today, without paying the earth - there's only one real alternative to consider... There's never been a better time to think Apple!

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PM5500	225	603e	32	2.0Gb	✓12	15" Integral	✗	✓	✓	✓33.6	Design	**£1291**	FAMILY PACK
PM5500	225	603e	32	2.0Gb	✓24	15" Integral	✓	✗	✗	✓33.6	Design	**£1350**	FAMILY PACK
PM5500 Black Mac	275	603e	32	4.0Gb	✓24	15" Integral	✓	✓	✓	✓33.6	Design	**£1703**	FAMILY PACK
PM6500	250	603e	32	4.0Gb	✓24	15" AV M/S	✓	✗	✗	✓33.6	Design	**£1468**	FAMILY PACK
PM6500	300	603e	64	6.0Gb	✓24	✗	✓	✓	✓	✓33.6	Design	**£2173**	CREATIVE STUDIO
PM6500	300	603e	64	6.0Gb	✓24	15" AV M/S	✓	✓	✓	✓33.6	Design	**£2349**	CREATIVE STUDIO
G37700	266	604e	32	4.0Gb +ZIP	✓24	✗	✗	✗	✗	✗	Extended	**£1996**	✗

*• FAMILY PACK software is as detailed above (see 5500/225 offer) • CREATIVE STUDIO software is as detailed above (see 6500/275 offer)

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Why Macintosh?

Performance:

All Macs have the latest PowerPC *RISC* processors (poor old Pentium systems are still *CISC* designs). Even entry level desktop Macs run at 180MHz, with 350MHz powerhouses at the top of the range (Mac PowerBook portables offer up to 240MHz).

Software choice:

Over 1,800 native software packages (written specially for PowerPC Processor Macs) have been shipped since Power Macintosh was launched in 1994 - plus there are thousands of industry standards which can also be used. Industry standard programs such as Microsoft Word and Excel, Pagestream, Word Perfect, FileMaker Pro, Quark Xpress, Photoshop and many others were developed for the Mac.

Creativity:

- Macintosh still dominates the creative world with an 80% market share in colour publishing.
- 65% of post-production video editing is on Macs.
- Macintosh is the most widely used system for the creation of Internet web pages.
- Most magazines (including the one you're reading right now) are created on Macintosh.

Multimedia:

- Apple is the World's No. 1 Multimedia PC vendor.
- All desktop Macs have a fast CD-ROM drive as standard (many portables have internal CDs too).
- In 1995, 42 of the top 50 selling CD-ROM titles worldwide were developed on the Macintosh.
- Many Macintoshes have built-in TV with teletext so TV clips can be recorded directly to disk as QuickTime movies.
- Many Macintoshes have built-in video in and out, for direct recording to VCRs.
- Some Macintoshes have internal digital video editing facilities as standard and many others can include this facility with an easy upgrade.

ISDN, the Internet & Communication:

- Macs are Internet/e-mail ready and many include modems with full send/receive fax and answer phone. Adding an ISDN connection is easy.
- Industry standard web browsers, Netscape Navigator and Microsoft Internet Explorer, were developed for the Mac meaning Access to Worldwide Web sites is easy.
- QuickTime, the Internet's standard format for video files, or QuickTime for Windows, are both Apple products. Of course QuickTime comes as standard with every Mac.

Connectivity & Expandability:

- Unlike other PCs, all Macs have networking built in as standard, so connecting systems together and adding shared printers etc. couldn't be easier.
- All Macintoshes have an external SCSI connector as standard. Adding external drives, ZIP/JAZ and other cartridge drives, scanners etc. really is Plug-and-Play.
- Low-cost digital cameras can be plugged into the Mac for instant real image input.

Education & Edutainment:

- Being the World's No.1 education supplier, quality Macintosh titles are widely available. Dorling Kindersley offer superb packages like The Ultimate Human Body and there is a varied supply from other leading software publishers too.
- Because Macintosh is the preferred system within many educational establishments, high quality software is assured.

Recreation & Games:

- Top games like The Ultimate Doom, Myst, Rebel Assault II, Dark Forces, Descent, Afterlife, Lost Eden, Legend of Kyrandia, Full Throttle & The Dig have all been developed for Macs.

Output & Presentation:

- Connecting and using colour printers (from Epson, HP, Apple and others) to Macs is so easy and with photo quality output the results are truly outstanding.

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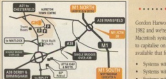

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■ Price: £169.95 (Developer version) £79.95 (Lite version) ■ Supplier: HiSOFT ✆ +44 (0) 1525 718181

What have we here then? Jason Compton asks "Is this just another new Amiga C/C++ compiler?"

Hot on the heals of StormC comes this tasty offering from HiSOFT in the shape of an ANSI C and AT&T 3.0 C++ compiler. But it's not really all that new: hidden in the "Welcome" section of the online help is the admittance that it's based on Maxon C++ 4.

This is a German product that you're unlikely to know much about, so it's jolly decent of HiSOFT to do the necessary translations and make it available in English.

Similarities

As you can tell from its manual, StormC was also created by some nice Germans. And it's probably not a coincidence that the name Jen Gelhar appears on the main compiler credits of both StormC and HiSOFT C++! This might lead you to believe that the actual guts of the compiler aren't totally different...

One thing that is obviously different, though, is the IDE. HiSOFT's is as thoroughly modern and friendly as StormC's, but they use quite different approaches. HiSOFT's emphasis is on little buttons that can be dragged and dropped. Everything from loading sources into the editor to setting breakpoints on functions can be done in this way.

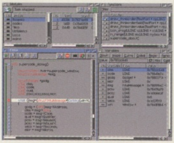
In fact, this raises niggle number one: Amiga users are used to drag-and-drop on the Workbench, but none of the IDE components (except the ASL file requesters) allow files to be dropped on them. And niggle number two is that you have to click on small buttons to 'pick up' a draggable object, rather than on the much larger text part of the object.

These minor considerations aside, the IDE is extremely nice to use. Everything hangs together well and the rather brief tutorial just about succeeds in introducing you to the main concepts. In many ways the IDE is superior to StormC's, but only marginally. There's still room for improvement; for example, the only real manual is on-line, so it's a shame that the help system is not context sensitive.

Help

A lot of work has obviously gone into translating the German specifics, like the GUI texts and the on-line manual. But unfortunately the results do not give as thorough and complete a product as you might expect from HiSOFT. With no printed manual supplied, you'd expect equally, if not more, useful on-line help. You wouldn't expect serious problems like no decent index or search facility. And a professional developer wouldn't expect compiler specifics (like register arguments and "#pragma"s) to be completely undocumented.

Some of the short-comings of the on-line help could be rectified if only it was possible to print it. But there's no such option on the HotHelp system. Browsing the help files with an editor offers no more comfort: the contents aren't plain text. Maybe it would be a bit easier if HiSOFT changed their mind and supplied us with a proper (and complete) printed manual?

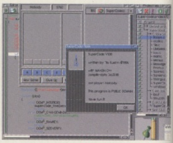


▲ A view of the great debugger in action.

Compiler

Of course, a product like this should not be judged on things like the IDE (or the manual) alone: it's the quality of the compiler that really counts. This is where HiSOFT C++ really shines, in one respect. Remarkably, the IDE offers only one level of optimisation (it's either on or off). And even more remarkably, this is labelled "Speed/Program Size"; most programmers realise that these are pretty contradictory (optimising for executable size normally creates a slower program).

However, in comparisons with StormC and SAS/C, the meaning of this option seemed to become clearer: HiSOFT C++ reliably produced the smallest executables. Turning off optimisation confused things a little: HiSOFT C++ still made the smallest programs. However, it also seemed to make the slowest programs...



▲ 'Supercode' is one of the example programs.

For the sample comparisons shown in the tables, the compilers were used with as similar settings as possible. 'Full optimisation' means the default optimisations in the case of HiSOFT C++ and SAS/C, and level 5 (peephole) optimisation for StormC. But, bear in mind that the particular examples used could equally well provoke the best or the worst in any one compiler, so they can only be considered a very rough guide.

Table 1: shows the times taken to compile the large animation example from the official ROM Kernel Reference Manual examples. These indicate that HiSOFT C++ is no slouch. The major difference comes when optimisation is turned on, but the results in the other tables should be borne in mind before making judgements. It's also worth noting that the example needed to be edited for HiSOFT C++. A certain amount of guesswork was needed to find a replacement for the "__chip" directive used by SAS/C (and StormC).

Table 2: shows the speed of a program to compute 800 digits of pi. As you can see, this is the most disappointing comparison for HiSOFT C++, where it is twice as slow

IDE

Integrated Development Environment is a collection of programs that work seamlessly together (through a friendly GUI) to provide a complete system for creating sources, compiling and debugging. (The 'IDE' in 'IDE disk' means something completely different!)

Table 1: Comparison of compile times

Compiler	Full optimisation	No optimisation
HiSOFT C++	0:27	0:26
SAS/C	0:47	0:30
StormC	1:21	0:29

Table 2: Comparison of executable speed

Compiler	Full optimisation	No optimisation
HiSOFT C++	0:58	1:03
SAS/C	0:32	0:37
StormC	0:27	0:30

Table 3: Comparison of program size

Compiler	Full optimisation	No optimisation
HiSOFT C++	30200	30900
SAS/C	30200	30560
StormC	37912	39852

as the other two compilers.

Finally, **Table 3:** shows the size of the executables used in Table 1, another good comparison for HiSOFT C++.

Looking at all the results, HiSOFT C++ performs well, except in the speed of the executables it produces. The all-round winner of the tests is (probably unsurprisingly) the ageing SAS/C. Who you consider to be second depends greatly on your point of view: executable speed versus compilation speed and program size.

Testing

The first thing you try when running a new compiler are the supplied examples. HiSOFT C++ comes with a number of examples but only two seem to have been tested, since they're the only ones with ".project" files. In fact, many of the supplied sources are versions of the official, Commodore-Amiga examples, but a number of them fail to compile for one reason or another. This shows that compatibility with the Amiga's de facto standard (SAS/C) is not very high. This would be forgivable if all the examples had been tested and updated, and if the manual offered some help in this area.

Optimisation

Optimising a program can mean two things: making it faster or making it smaller. Sometimes you can do both, but in the extremes one generally precludes the other. Optimisation of either sort is normally very complicated and can add significantly to compilation times. Most compilers try to optimise only for speed, using techniques such as inlining functions, common term elimination, peephole optimisation, loop reduction and increased use of processor registers.

Another problem that appears quickly under testing is the instability of the EasyObjects classes (supplied only in the Developer version). The programs produced using them have a habit of crashing when run from the command-line rather than through the IDE. HiSOFT were unaware of this rather serious bug, but are hopefully now working with Maxon to solve it quickly.

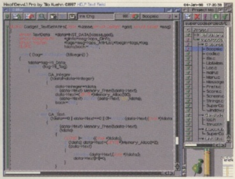
This is a real shame because a decent C++ wrapper on the Amiga OS is something that would be very useful to a lot of developers. The other shame is the total lack of (English) documentation. Even the EasyObjects example sources are German.

Developer or Lite?

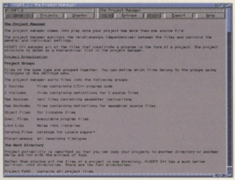
The inclusion of the EasyObjects classes is not the only difference between the Developer and Lite versions.

Also supplied only in the Developer package is the rather essential (and very good) debugger. This is pretty lucky because without this there would be nothing to recommend the Developer option over the much cheaper Lite version. Included with both versions is HiSOFT's own Devpac 3 assembler, which is not integrated with the other parts of the system.

This seems to be present simply because the supplied (and integrated) MaxonAssembler has not been translated from German. Having Devpac 3 'thrown in' is therefore only a half bonus, but given its pedigree it is definitely not one that should be sniffed at.



▲The project manager and syntax highlighting editor.



The Project Manager

The project manager comes into play once your project has more than one source file.

The project manager monitors the relationships (dependencies) between the files and controls the general and individual settings.

HiSOFT C++ manages all of the files that constitute a program in the form of a project. The project structure is shown as a hierarchical list in the project manager.

Project Organization

Project Groups

Files of the same type are grouped together. You can define which files belong to the groups using *Filetypes* on the *Settings* menu.

The project manager sorts files into the following groups:

C Sources	files containing C/C++ program code
C Includes	files containing definitions for C source files
Asm Sources	text files containing assembler instructions
Asm Includes	files containing definitions for assembler source files
Object Files	for linkable files
Exec. Files	executable program files
Link Libs	Amiga link libraries
Catalog Files	catalogs for Locale support
Miscellaneous	all remaining filetypes

The Work Directory

Project portability is important so that you can copy your projects to another directory or another Amiga and run with the minimum of fuss.

Rather than placing all the files of a project in one directory, HiSOFT C++ has a much better solution: root directories. There are two root directories:

Project Path	contains all project files

▲TOn-line help like this is the only kind of manual there is.

Better than StormC?

So, is HiSOFT C++ worth considering over StormC? Because of HiSOFT's extremely good reputation the answer has got to be "Yes." But it's a slightly reserved "Yes."

There are a number of flaws that you really wouldn't expect from a HiSOFT product and that prevent it being a sure winner over StormC. Without a doubt, HiSOFT and Maxon will do something about these problems fairly soon, and prove yet again their great support for the Amiga. ■

Jason Compton

HiSOFT C++

System Requirements

OS 2.0+, hard disk, RAM: 6Mb

Ease of use	**94%**

Apart from a couple of minor niggles, the IDE is really good, even a bit better than StormC's.

Performance	**86%**

Pretty quick compiler, producing small executables that aren't as fast as they could be.

Value for money	**80%**

A good price for a quality system, but there ought to be a printed manual that's also more complete.

OVERALL

In some ways it's better than StormC, but in others it's not.

89%

All You Need For Internet And Comms!

netconnect v2

NetConnect v2 is even easier to connect to the Internet! Launch the new Wizard GUI, choose your modem, enter a few user details and let the Wizard do all the rest for you! Simple! With version 2 you don't even need to worry about the provider - everything is automatic, everything is point and click! ***Amiga Format*** concluded about **NetConnect v1** (June 97 issue): "Almost the perfect package for the Amiga Internet user", "If you need to get online, this is the easiest way to do it" and "It's good value for money too - especially the bundle including the 33.6K modem." We have listened to our NetConnect v1 users, noted their comments and added some other new features. NetConnect v2 is available on CD-rom and floppy disk.

10 Commercial Programs within NetConnect v2!

AMITCP-GENESIS

NetConnect v2 users will be the first people to use this new TCP stack! Based on AmiTCP Pro, we have added a number of changes - new Wizard, MUI based dialler, multi-user support, 'events' control, status window (time on 'net, connection speed), new prefs.

MICRODOT-II

A superb combined email and newsreader within one GUI! Contains all the major features you would expect - MIME attachments, support for POP3/APOP, search function, multiple signatures, multiple user support, Arexx port etc.

AMIRC

Chat online with friends about topics, join conferences, organise mass meetings. The IRC is one of the most addictive elements of the Internet - AmIRC is the best Amiga IRC client.

AMTELNET

Telnet into remote computers (from anywhere in the world) - edit files on a computer in Germany from your Amiga, maintain directories for your web pages, check the status of the network, play online games.

AMTERM

AmTerm is a communications package which allows you to connect to a BBS, to another user (direct link), transfer files via a serial connection (Amiga<>Amiga, Amiga<>PC etc).

VOYAGER-NG

Voted the best Amiga web browser by CU Amiga - supports SSL for securing ordering, HTTP 1.1 (for the fastest web access) fastmem AGA support (use fast mem to store images) and very soon JAVA™, Javascript and AGA fastmem support!

AMFTP

AmFTP is the ultimate Amiga FTP client. Download/upload programs from any FTP site, also supports ADT to allow you to download the latest files from the Aminet and Archie to search FTP sites for files.

AMTALK

A direct chat client for the Amiga. Acts as an online answerphone service for people to leave messages. You can talk directly 'realtime' to friends on the Internet.

NETINFO

NetInfo is a cool tool for analysing the network and the people connected to it - 'finger' your friends to see if they are online, 'ping' servers to find the response speed.

X-ARC

X-Arc is the Amiga's answer to WinZIP™ - automatically decode LHA/LZX/ZIP files, edit the contents of these archives, create your own archives. Full integrates with NetConnect v2!

NetConnect v2 is a state-of-the-art Internet package aimed towards Amiga users wanting to connect for the first time (absolute Internet beginners), those who have been connected a few months (novices) and now, due to the keyfile nature of the software, is suitable for advanced Internet users who want to use the modules contained within NetConnect with their existing TCP stack. **NetConnect v2 enhancements include:**

- **SSetup Wizard** - makes configuring your ISP a doddle. Choose your modem, enter some user details and then the rest of the process is completely automatic!
- **MIME Prefs** - Central MIME prefs interface means that you only need to setup file types once with on nice interface! This saves masses of time and effort (especially for beginners).
- **Control Manager** - A central control manager that allows you to store your favourite web and ftp sites, friends, email addresses, fax numbers and then use them within NetConnect modules - Voyager etc!
- **Multi-User** - Use Genesis/NetConnect with more than one user (a family) and log in on startup.
- **New programs** – AmTalk, NetInfo and X-Arc (a brand new WinZIP™ style archive management tool. Downloads lha/lzx/zip files from Voyager etc, auto-extracts them into X-Arc's GUI, manage the files).
- **Programs are now keyfile based** (can be used with any TCP stack - Miami etc)
- **Extras pre-configured**: MIME types (CD only), datatypes (CD Only), online help files etc
- **Dock bar** - allows you to create multiple dock bars with point and click ease - just drag the icons you have created into the icon bar! NetConnect v2 is pre-setup with its own icon bar for ease of use.
- **Programs are now keyfile based** (can be used with any TCP stack - Miami etc)
- **Printed manual** - understand NetConnect and the Internet quickly and easily (advice from NC users!)

NetConnect v2 CD	[contains many extras: datatypes, MIME types (for www browsing) and much more]	£52.95
NetConnect v2 Floppy Disks	[only contains the core programs & online help documents]	£54.95
NetConnect v2 Upgrade from v1	[registered NetConnect v1 users only]	£call!

vapor software

If you are not interested in purchasing NetConnect you can also buy Vaporware Products individually either by disk, a keyfile sent via e-mail (quickest and cheapest method) or on CD-rom (currently only Voyager-NG and Genesis can be purchased on CD-rom) - CD versions have added extras such as pre-setup MIME types (VNG), HTML documentation etc.

	On CD	*By Disk*	*By EMail*
Genesis - New TCP/IP Stack for the Amiga [Available December]	£28.00	£22.00	£20.00
Miami - TCP/IP Stack for the Amiga	n/a	£28.00	£26.00
Voyager Next Generation	£28.00	£22.00	£20.00
Microdot-II	n/a	£20.00	£18.00
AmIRC	n/a	£20.00	£18.00
AmFTP	n/a	£20.00	£18.00
AmTalk	n/a	£17.00	£15.00
X-Arc	n/a	£17.00	£15.00
AmTelnet + AmTerm Package Deal	n/a	£20.00	£18.00

- *5% Discount when 2-4 Vapor products are bought, 10% Discount for 5+*

internet informer

Still unsure about connecting to the Internet? Confused by all the acronyms such as 'ISDN'? Confused about the costs? Wondering whether your Amiga can access the Internet? No need to worry any longer - we have released issue 2 of our 'Internet Informer' for Amiga users. A leaflet that offers you all the information you require in order to get your Amiga onto the Internet. Modem choices, software that is available, service providers for the Amiga, questions and answers. It also contains information about NetConnect and what we can do to get you onto the Internet. For your free copy, call us or write to us.

high quality modems

Choose from two high-quality **branded** modems - the top of the range, award winning PACE 56 or the middle of the range Dynalink modem. Both come with a five year warranty. The PACE modem also ships with free lifetime technical support, UK caller ID (only modem available which supports this) and non-technical, easy to read documentation. The PACE is currently the best 56K modem you can buy, is UK produced and is recommended by the Internet press.

- Quality branded PACE 56 voice modem
- 56000 bps DATA/FAX/VOICE modem - true v34+ Throughput to 115,200 (230,400 for internal) BPS
- Group 3, Class 1 send/receive FAX (14.4)
- V.80 (video conferencing) capable
- Call Discrimination
- Fax on demand
- UK Caller ID
- 10 LED's for full status monitoring
- Analogue Simultaneous voice and data (A.S.V.D.)
- Speakerphone for hands-free operation
- Upgradable ROM chip
- On/Off switch to rear of unit
- Includes headphones/microphones - for voice control
- 5 year warranty
- Serial cable included (with 9 & 25pin connectors)

The above specifications are for the PACE 56K external voice modem. Dynalink 33.6K and 56K are very similar, except for the UK Caller ID support.

Dynalink 33.6K External Voice/Fax/Data Modem	£79.95
Dynalink 56K External Voice/Fax/Data Modem	£104.95
PACE 56K External Voice/Fax/Data Modem	£129.95

modem pack options

Various money saving packs are available. These are all based on either the Dynalink 33.6K or 56K and PACE 56K modem option. Call us for other pack options if you have your own pack idea!

Code	Pack Contents	£ Prices
PK01	33.6 Modem & STFax	£ 89.95
PK02	33.6 Modem & NetConnect	£109.95
PK03	33.6 Modem & NetConnect & STFax	£119.95
PK04	33.6 Modem & NetConnect & Hypercom1 & STFax	£149.95
PK05	33.6 Modem & NetConnect & Hypercom3Z & STFax	£169.95

ADD £25 for a Dynalink 56K Modem (instead of the Dynalink 33.6K)
ADD £50 for a PACE 56K Modem (instead of the Dynalink 33.6K)

- All packs come with one month free connection to a major Internet Service Provider
- Choose between the CD or Floppy disk version of NetConnect with your modem pack
- Internal modem available - ISA card suitable for the Boxer.

high speed serial cards

new models!

from.. £44.95

The ***Hypercom*** range of high-speed serial cards offer your Amiga the fastest connection to the Internet for comms and fax transfers. Available for the Amiga 1200 (these serial cards are placed within the internal clock expansion port - leaving the PCMCIA port and trapdoor free!), A1200 Towers and Zorro-II/III based machines (Zorro version suitable for A1500/2/3/4000 or a A1200 tower). These cards are currently the fastest serial cards available for the Amiga (upto 460,800bps connection). The Hypercom 3/3Z cards also ship with a buffered high speed parallel port which will drastically improve printing speeds on a laser (4x speed). The Hypercom 3/3Z cards contain a 9-pin and standard 25-pin serial ports whereas the Hypercom 1 ships with one 25-pin port. Serial and parallel drivers included. English documention.

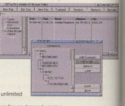
Hypercom 3Z

Model	Machine	Specifications	Price
Hypercom1	A1200	1 x 460,800bps highspeed buffered serial port	£44.95
Hypercom3	A1200T	2 x 460,800bps highspeed buffered serial, 1 x 500K bytes/sec buffered parallel port	£89.95
Hypercom3Z	Zorro-2/3	2 x 460,800bps highspeed buffered serial, 1 x 500K bytes/sec buffered parallel port	£79.95
Hypercom4	Zorro-2/3	4 x 460,800bps highspeed buffered serial ports	£99.95
Hypercom3i	Zorro-2/3	Expansion module for Hypercom 3Z/4 offering 2 x 460,800bps highspeed buffered serial, 1 x 500K bytes/sec buffered parallel port. Just plugs onto the card, no Zorro.	£59.95

stfax professional

£29.95

STFax Professional is new commercial fax program for the Amiga containing the sort of advanced features you would find within commercial PC fax software. STFax has been in the shareware for the last few months, and the brand new commercial "professional" version offers even more advanced features plus voice control for voice modems - use your Amiga as a digital answer machine, create a fax on demand service (ideal for small businesses. Allows your customers to contact you at any time and use fax on demand to remotely download facsimile information about your products!) and create advanced voice control scripts.



- **Full Fax Features:**
  - Support for all fax/modem classes (1, 2, 2.0)
  - Phonebook (store all your favourite fax and telephone numbers)
  - Scheduler (store fax messages to be sent at specified times)
  - Reports (quickly see when a fax was sent and received)
  - Datatypes support for image conversion
  - Printer driver to redirect all print-outs to a fax file (print from Wordworth, Pagestream etc!)
  - Viewer for viewing outgoing/incoming fax messages
  - Fax forward (forward faxes to another machine)
- **Advanced Voice Features:**
  - Use your Amiga as an answer machine (digital messages, unlimited storage space!)
  - Advanced voice scripting - create your own voice network or fax on demand service
  - Use your modem as a telephone (make and receive calls via STFax Pro and your modem)
  - Remote access (listen to your messages from an external source. ie. from another country!)
  - Caller-ID (see exactly who has called and left you a message)
- **Your Own Mini-BBS:**
  - One or more secure 'doors' (access areas)
  - Point and click setup
  - Allow users to upload files and send messages
  - Custom greetings and menus

● ●

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Digital Quill

■ Price: US$34.95 (£22.00 approx) ■ Developer: Finale Development ✆ (001) 203 235 7518
■ http://www.finale-dev.com

Be it papyrus or a palmtop, you need a medium if you're going to write. Check out whether the Digital Quill is mightier than the sword.

Right around the time CygnusEd 4 was being talked about, Finale Development announced the re-publication of Digital Quill, a text editor that was first released in 1994. Quill has been cleaned up and tweaked, and is worth examining as another way to escape the doldrums of AmigaOS' ED program.

Because it's so new, Quill has been designed from the ground up around more modern concepts than some of its contemporaries. Quill was designed with the assistance of the ClassAct GUI development system, for example. Which brings up a very important point – Quill, unlike much of the competition, actually boasts something resembling a friendly interface, complete with large easy-to-use buttons. Quill's author has also worked to streamline much of the user interaction – the pull-down menus are very logical and concise.

One of the first off-putting things about Quill is that it has some predetermined limits which seem unnecessary. One is a cap on project windows per launch of the Quill program (the manual claims 10 – I hit a brick wall at 8), another is a limit on the total memory that can be made available for undo/redo (500K). Granted, this should be plenty for 95% of situations, but why impose an arbitrary restriction?

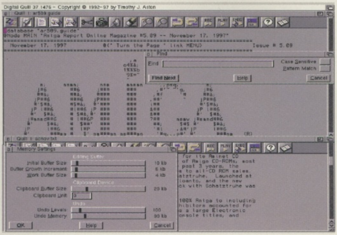
Integratation

Quill endeavors to be the programmer's compiler. It ships ready to be integrated with SAS/C, Modula-2, or DICE C through Quill's macro system. Building additional macros is not a task for the beginner, but it's possible if you wish to customise the program for use with your favourite development system.

Beginners should have no trouble whatsoever getting comfortable with Quill – its friendliness and straightforward approach are a snap to handle. For example, when you open a configuration window, the title bar gives additional information on the various options presented.

Similarly, the built-in programmer's linkups will come in quite handy for users of those three popular development systems. Much is made of Quill's "bracket-matching" or "fence-posting", which helps ensure that you the programmer have not lost track of many nested loops of code.

My concerns about Quill's appeal are not for the beginner or for the programmer but for the "power text editor." Quill has all the necessary features – find/replace, undo/redo, and can change the case of blocks of text, but certain other niceties are missing.



```
database "ar509.guide"
@Node MAIN "Amiga Report Online Magazine #5.09 -- November 17, 1997"
============================================================================
 November 17, 1997          @{" Turn the Page " link MENU}          Issue # 5.09
============================================================================
```

Initial Buffer Size: 10 kb
Buffer Growth Increment: 6 kb
Work Buffer Size: 4 kb
Clipboard Buffer Size: 20 kb
Clipboard Unit: 0
Undo Levels: 100
Undo Memory: 90 kb

```
 for its Aminet CD
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atztruhe.  Launched at
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ck with Schatztruhe was

100% Amiga to including
hibitors accounted for
a a large Electronic
onsole titles, and
```

▲ Quill in action – note the multiple project windows and easy to use requesters.

On the minus side

The paragraph justification is not as robust as I would like, nor is there a way to centre a mass of lines without resorting to ARexx. (For the record, the German text editor Edge has the absolute best justify routines I've ever seen.) The ability to spawn a second, "split" window would have been welcome, as it is found on most of Quill's peers.

This is not to say that Quill doesn't have a great deal to offer in terms of flexibility. While ARexx interfaces have become a bit of an assumption, Quill's is notably versatile. You can also access Quill's internal command language, which is an immediate-mode way to communicate directly with Quill's machinery. The commands are all documented in Quill's printed, illustrated manual.

If it sounds like I'm being a bit rough on Quill's abilities, it's because the new guy always gets the closest scrutiny, and Quill is definitely the new guy of text editors. When it breaks with tradition, it's going to get called for it, one way or the other. Quill's ease of use is absolutely second to none among its competition. But then there are the features which by all rights belong in a power editor, and if they're missing, it's apparent and begs the question.

I would not hesitate to recommend Quill to a casual user – someone using the editor for letters, e-mail, basic composition. I would point my C-literate friends to it as a possible alternative to whatever editor they currently labour under. I fall pretty solidly into the "power text editor" category, however – I use a text editor to clean up text from all sorts of places and work it into an online magazine format. My needs are a bit different and I definitely feel what's missing from Quill. These omissions are what keep Quill from being an absolutely brilliant editor. ■

Jason Compton

DIGITAL QUILL

Developer: Finale Development

System Requirements:

1 Meg memory, OS2.1

Ease of use......92%
Friendly without being gaudy.

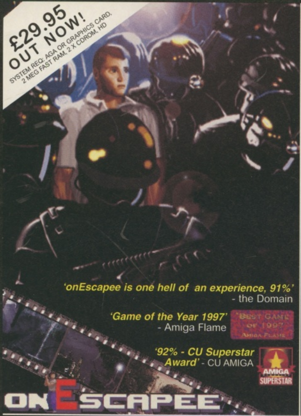
Performance......85%
What's there works well – what's not there is the problem.

Value for money......90%
It is worth the money, drawbacks and all.

OVERALL

The young turk isn't quite king of the hill yet.

87%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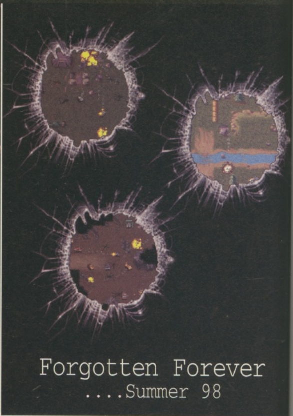
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CygnusEd 4.2

■ Price: £29.99 ■ Supplier: Weird Science ✆ 0116 246 3800 ■ http://www.weirdscience.co.uk

CygnusEd was born before AGA, AmigaOS 2, and many reunion tours. Has it stayed current, or is this old man just too old?

Most of the very first programs that crawled out of the chaos of the Amiga's launch in '85 to '86 were crude, primitive things which have largely fallen out of sight and mind. If they're remembered at all it's usually to say "Wow, it's lucky we had X because it tided us over until Y came round."

Where Amiga text editors are concerned, CygnusEd was the proverbial Y – the better-quality program that wasn't the first of its kind, but was instead the standout of its clan (If you've ever investigated Commodore's version of MEmacs, perhaps you know of what I speak). If ever there was a program that embodied the look and feel of AmigaOS 1.3 though, CygnusEd was it – and for some time its functionality has been at a bit of a standstill. Enter Olaf Barthel, one-time consultant to Escom's Amiga Technologies and general German Amiga whiz, to do some modernising/add some new features.

Identifying the need

Before you figure out if you care what CED 4.2 brings to the table, it's worth quickly surveying why you might care in the first place.

After all, your operating system comes with more than one text editor – ED, which is better than nothing but something far short of user-friendly, and MEmacs, which, well, if you're an Emacs whiz it's no trouble, but for modern man it's a major chore because its interface is almost entirely based around intricate key qualifiers and combinations. And if you're at all interested in writing on your Amiga you likely have some sort of word processor, so again, why pay another 25 for something that's doubly redundant?

Real improvements

CED's real improvements have been in increasing the robustness of the operation, as well as automating a number of very useful procedures. In particular, the ability to convert tabs to spaces is extremely nice – you will find that when it comes to AmigaGuide and HTML, tabs are strictly to be avoided, but if your source material is heavily tabbed, it can be a pain trying to convince a find-and-replace routine to search for them. (CED's search feature does support "special characters" like tabs, returns, etc.)

Better use is made of available memory for unlimited undo/redo, and I'm particularly enamoured of the ability to automatically convert words to upper or lower case. There may well be cases when you need your output to be uniform in case, and often bringing in a file from a foreign format can cause some lower case/caps issues.

Aside from overcoming shortfalls of ED and MEmacs, a text editor actually serves needs a word processor like Final Writer or Wordworth are ill-equipped for. A text editor is generally unconcerned with font sizes and bitmaps and style settings which make sharing between word processors a pain.

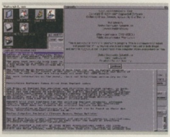
They are also typically better suited than a word processor for programming, creating AmigaGuide or HTML documents, or being used by other programs (such as e-mail clients and Web browsers) for text entry than a word processor would be. If you need to print out a stock of e-mail, I guarantee you it is considerably easier, quicker, and better looking to use a text editor than to put it in a nice bitmap proportional Final Writer font.

Calling Rocketship CED

In describing CygnusEd and the issues involved in updating it, Olaf Barthel said something along the lines of "CygnusEd has always basically been a super-fast text display engine with an editor thrown on top of it." Back in the limited memory 68000 days, this was substantially important, as large documents can bog down the system as you skim, zoom, and search through them.

Times and specs have changed since then but the core of CED is still to be light on the visuals and heavy on efficiency. A single scrollbar adorns the screen, a status bar sits at the top, and the rest of the screen is saved for text. Nowadays, that screen can be anything a reasonable RTG system such as CyberGraphX or Picasso96 can define. The screens can also be public, allowing you to open and tile several CED windows on a single screen – extremely helpful for doing serious editing of a file. (This is how we assemble Amiga Report Magazine.)

The revisions have done something of a clean up on the menu system of CED although it's still somewhat intimidating when you first sweep the pointer across the menu bars. Rest assured, though, that the basic conventions you'd expect are in place: text is click-draggable, keyboard scrolling conventions are as they should be, and the scrolling can still be the eerie "smooth" scrolling found in many glitzier text viewers.



◀ **CED can be placed on public screens – such as the Workbench.**

CED's documentation is online, in AmigaGuide format. I was a little disappointed that launching the docs from the help key occupies the CED task. The documentation is very thorough, although an easy-to-find summary of changes over various CED revisions would have been helpful for those just catching up with the curve.

The GUI is still a bit uncomfortable – there's not a single close gadget to be found anywhere, menus are nested when perhaps a popup box might have been more appropriate, and CED has some defaults I would question (such as being installed with word wrap disabled). This oversight can be fixed easily, but it requires the user to do more initial customisation than other editors might.

CED 4.2 is not a reinvention of the decade-old program, it's just made it more comfortable with the present and tacked on some welcome improvements. ■

Jason Compton

CYGNUSED 4.2

System Requirements:
1 Meg memory, OS2.04, CD-ROM

Ease of use **78%**
CED's GUI is spartan but functional.

Performance **94%**
Grandaddy still has his stuff together.

Value for money **93%**
It doesn't replace a WP, but it's a very nice complement.

OVERALL
CygnusEd still slings text like nobody's business. **89%**

Power 2x CD-ROM

■ **Price: £79.95** ■ **Supplier: Power Computing ✆ +44 (0)1234 851500**

Power launch a budget external CD-ROM drive. Low cost as well as ease of use make a mouthwatering combination...

The biggest development in the Amiga user base over the last 18 months has been the massive surge in popularity of the CD-ROM drive, with the majority of active Amiga users owning one. If you haven't yet, you might find this budget solution from Power Computing is just the temptation you need.

Apart from our own cover mounted CD-ROMs, pretty much all new software comes on this format and if you want much choice, you will need to read CDs. We've described in the past how to patch a cheap IDE CD-ROM drive to your computer for under £50, but it is a DIY option and requires disassembly of your computer. Unfortunately until now easier options have been much more expensive.

Scuzzy rodents

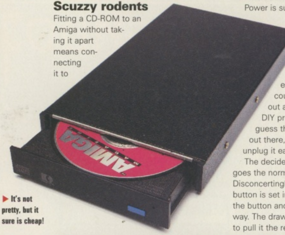
Fitting a CD-ROM to an Amiga without taking it apart means connecting it to the PCMCIA port. This is where the Squirrel from HiSoft comes in.

This contains a SCSI interface, and plugs straight into the side of an Amiga A1200 or A600 allowing the connection of pretty much any SCSI device. A 50 way centronics cable dangles out the back, and this connects to the CD-ROM drive. Software installation is as simple as it could possibly be – so all you need to do is keep clicking on OK and it will work. Installation time totals about 5 minutes in all and the operation does not require too much expertise.

It is great that Power have managed to bundle a Squirrel with a CD-ROM drive, case, power supply and a couple of games CDs (Chaos Engine good, Oscar/Diggers bad) for such a low sum, but the price margin does tell. The case is basic, a nice enough black hammered finish but not as trim as most.

Power is supplied by a small black external PSU brick, a part no doubt sourced cheaply, but it does the job. There are phono connectors for audio out, which can be fed straight into a stereo or powered speakers. Alternatively you could mix it with the Amiga audio out as described in last month's DIY project. No power switch alas, I guess the ultra tight budget just ran out there, but nevertheless you can unplug it easily enough.

The decidedly odd drive mechanism forgoes the normal fascia, being all drawer. Disconcertingly this means that the eject button is set in the door, but it works. Press the button and the draw pops out a little way. The drawer isn't servoed, so you have to pull it the rest.



▶ **It's not pretty, but it sure is cheap!**

Good performance/price

Without extras like servos it seem a little cheap, but cutting cosmetic corners is actually something of a blessing, as in operation the mechanism is actually rather decent. The draw is solid and the disk rigidly suspended.

It clicks in place with a reassuringly sturdy clunk, and actually does a rather good job of reading disks. A scratched CD is a good test, and one we have which gives dozens of read/write errors on many more expensive CD-ROMs read perfectly on the Power device. Audio playback was also better than expected, I've heard cheapo CD audio players that sound worse. Interplay, supplied on the utilities disk along with Amipeg, Abackup and some photoCD tools, does a fine job of playing background CDs.

Double speed is slow. This one, which appeared to be just over double speed, is at the bottom end of what is available, but things are all relative. In day to day use speed is not so important, and apart from spooled animations in some games, this drive will be quick enough. Getting data off a disk at around 300K/s is not a particularly painful experience. Installation and fitting is as painless as it can be, and for what you get £80 doesn't hurt too much either.

A superb bargain which will open up a whole new world of software to you, anyone without a CD-ROM drive – and with an eye to the reservations about the software mentioned in the boxout – would be well advised to snap one up now before they sell out. ■

Andrew Korn

The software

The Squirrel software is blissfully easy to use, and has good CD32 support allowing you to boot from CD32 disks. It is also unfortunately the bane of every major CD publisher and deeply hated by many. Using the ancient Commodore CDFileSystem, it simply doesn't come up to modern standards. It could not read CUCD10 amongst others, prompting us to give out hundreds of remastered copies. I was under the impression that HiSoft had now updated the software, but this one is going to cause problems and a thousand more CDFilesSytem users will not be ideal. Fortunately our CDs are now all compatible and all contain software to allow users to easily fix these problems. When we told Power Computing, they told us they would try to resolve this anyway.

POWER 2X CD-ROM

System Requirements: A1200 or A600, 2Mb, hard drive strongly recommended.

Ease of use..........93%
Blissful to set up but updating software may be necessary.

Performance..........82%
Slow mechanism and fixable file system problems, otherwise no complaints. SCSI interface a bonus.

Value for money..........97%
An absolute steal.

OVERALL
If you like the price buy now – these will sell very fast!

91%

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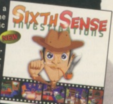
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PD Scene

The PD Scene comes up trumps this month, with another great selection of games. Steve Bye plays them all to his little hearts content.

★★★★★	**Totally blinding**
★★★★☆	**Good**
★★★☆☆	**Average**
★★☆☆☆	**Substandard**
★☆☆☆☆	**Oh dear**

Quasar Wars

■ Type: Shoot-em-up

■ Available from: Available from: OnLine PD. 1, The Cloisters, Halsall Lane, Formby. Liverpool. L37-3PX. Tel: 01704 834 335.

■ Price: 75p

What a good month this has been for games. I had a hard time choosing Game Of The Month but in the end I had to decide between Quasars Wars and Burton Bird.

The last named won due to it being more original. Originality is probably Quasar Wars' weakest point, but happily in most other departments it does the business. Take the dangerously eye-catching graphics, the ear-thumpingly good music and the smooth gameplay.

Right from the start-up screen you can tell that this game is going to be well produced, everything is professional and smooth, a few years ago this game wouldn't have looked out of place as a budget commercial release. So what's it all about then?

First off you must read your mission briefing. The early missions are very simple. For example, shoot down six enemy ships. You must then equip your ship with the required weapons and then it's into the action. The play area is a huge 8-way scrolling background of well drawn graphics. You control your ship with a joystick, use the fire button for your unlimited cannon and the space bar to drop bombs.

You use the F keys to select different weapons. At the bottom left of the screen you have a RADAR scanner for tracking down your foe. I was mildly disappointed that there were no sound effects for explosions or your guns and bombs, all you have is some backing music, albeit an excellent soundtrack. I feel the game is slightly marred by this, as when I first started blasting it felt like a sort of anti-climax when my silent cannon destroyed a ship.

Having said that Quasar Wars is a pretty nifty shooter that deserves your attention. The full version is £15 if you fancy it, but check out this demo first. ★★★★★

Skirmish

■ Type: Multi-player Dog-fight

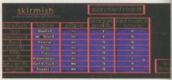
■ Available from: Classic Amiga PD, 11 Deansgate, Radcliffe, Manchester M26-2SH Tel: 0161 723 1638

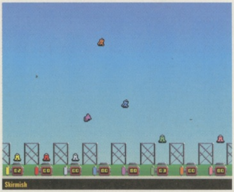
■ Price: £1 plus 75p P&P per order.

OK game mates, here's one of those games that to get the best out of it requires seven friends, a free weekend and four carrier bags of lager. Skirmish is a 1-8 player dog-fight game. As a 1 player game it's pretty standard stuff, but get 2 or more friends in and you will be whooping it up for the weekend.

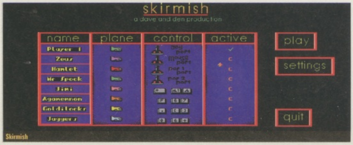
The game starts with all eight planes on their "launch pads" at the bottom of the screen facing skyward, more like an Apollo launch than an aeroplane, but let's not get too picky yet, after all the aim of this game is fun – with a capital F. You must press fire to launch your plane into the field of battle, which is basically a blank screen, and do battle with thy enemies.

Until you master the art of dodging and diving the chances are you will be toasted almost immediately. Luckily you have unlimited plane's at your disposal and the winner of each round is the one with the most kill points. You can set this and more in the settings menu. Sadly there is only one slow-firing weapon available to shoot down your opponents with but that doesn't distract too much from the fun. You are going to get bored with this game sooner or later, even playing your mates in a league tournament, but hey, you will have a great time until then. Chocks away! ★★★☆☆





Skirmish



Skirmish

Bouncer

■ Type: Arcade/Puzzle game

■ Available from: Available from: OnLine PD. 1, The Cloisters, Halsall Lane, Formby. Liverpool. L37-3PX. Tel: 01704 834 335.

■ Price: 75p

With a title like 'Bouncer' you would in all probability deduce that the game will include a spherical object that will perform some sort of bouncing motion, and you wouldn't be wrong. Bouncer is a conversion of an old 8-bit game called 'Bounder'.

The basic premise of the gameplay is to bounce your way up the horizontally scrolling screen to the end of each level without getting killed, and of course picking up the obligatory bonuses on the way. For some insane reason you find yourself perched on a world of tiles suspended in space... as you do.

The ball you control constantly bounces up and down on the spot. Using your faithful joystick you must move the ball along the tiles, being careful not to drop off into the void. There are plenty of obstacles to avoid such as spikes and reversed control tiles. It's all simple stuff, but maddeningly addictive.

Luckily the designer of the levels had the sense to make the game easy to get into, a blind-folded hedgehog with no arms will be able to complete the first three levels without too much of a problem, but from there on things suddenly get rather tough indeed. Not exactly a smooth learning curve, but the game still grabs you by the charlies and won't let go.

The graphics are just adequate but the music and sound effects are ear-warmingly nice. There's a lot to like about this 7 level demo, why not give it a whirl. I doubt you will regret it. ★★★★☆

Fayoh

■ Type: Mario clone

■ Available from: Classic Amiga PD, 11 Deansgate, Radcliffe, Manchester M26-2SH Tel: 0161 723 1638

■ Price: £1 plus 75p P&P per order.

According to the documentation the title of this game is a corruption of the word 'fire'.

It's a strange title for a game that contains no shooting in it at all! Fayoh is a distinctly obvious Mario clone and not a bad one at that. The level designs are very similar to the original Mario game and so are some of the graphics. The gameplay is quite relaxed with no time limits and you can progress through the levels fairly easily. In the great Mario tradition there are lots of hidden things such as extra lives, bonus games and hidden levels.

There are two hidden levels in this 5 level demo version. I enjoyed playing Fayoh immensely but the main sprite is as ugly as a bug, it's a pale green robot looking thingy that definitely looks out of place. Apart from that though Fayoh is a jolly good game and the full version could well be worth the £6-£10 required by the author if this genre of game is your bag. ★★★☆☆

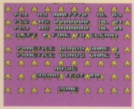
Burton Bird

■ Type: Arcade/puzzle

■ Available from: F1 Software. 1 Lower Mill Close, Goldthorpe, Rotherham. S63-9BY. Tel: 01709 888 127

■ Price: £3.99 plus 75p P&P

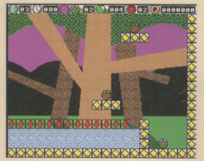
Game of the Month

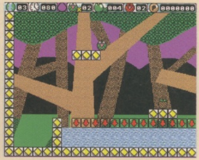


```
PL1  HS 0007770  HL 05
PL2  HS 0000000  HL 01
PL3  HS 0000000  HL 01
(LEFT + FIRE TO CLEAR)

PRACTICE BONUS GAME 1
PRACTICE BONUS GAME 2

MUSIC
SOUND TEST 00

DONE
```

Nearly everything about this game is a little different from the norm, but luckily in the good sense of the word. The graphics for example are distinctly 8-bit style, yet somehow look very cool, especially the stippled backdrops on each level. All the music and sound effects in the game are of the chip variety, a la' Commodore 64, but again, they all sound great. Take the control of Burton Bird himself, once you set him off in a direction he will continue going that way (at high speed) until he hits an obstacle or you change direction yourself. Again, weird, but it works well and adds another twist to the game. The level design is quite fiendish in places and it appears a lot of thought has gone into it, the occasional bit of lateral thinking is required here and there so be alert.

The general aim of the game is to clear each level of fruit, pick up the bonuses and kill or avoid the bad guys. Once you have completed a level you never have to play it again as your status is automatically saved to disk. Works for me. There are also sub games starting on level 4 where you can win points, lives and complete level bonuses. My first impression of Burton Bird was 'er, wot's all this about then?' But Burty won me over in a matter of minutes. It's brilliantly designed and great fun to play. ★★★★★





Battle of the Stink Beetles

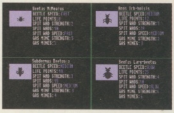
■ Type: 2 player battle.

■ Available from: PD Power 15 Lovetot Avenue, Aston. Sheffield. S26-2BQ Tel: 01374 150972

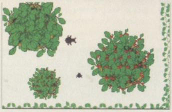
■ Price: 50p +75p P&P

This game stands out as the weakest of this months crop of games, though that doesn't necessarily mean it's crap. It's a 'hmmm' sort of game that will appeal to some and not amuse others at all.

See what you think. First off you are going to need two joysticks (or pads) and a friend (an enemy will do I suppose?) If you don't have any friends then forget it as (a) You are a sad git and (b) BOTSB is a two player only game. Personally I have never warmed to 2 player only games, especially those that have silly titles and scenarios but that's probably because I am a sad git anyway. You start the game by choosing one of four stink beetles each. Each beetle has different skills and properties so if you can read the awful font try to choose the most appropriate for the ensuing battle.



```
Beetus McMeatus
BEETLE SPEED:FAST
LIFE POINTS:8
SPIT WAD STRENGTH:2
SPIT WADS:10
SPIT WAD SPEED:FAST
GAS MINE STRENGTH:5
GAS MINES:3

Anus Ich-beisis
BEETLE SPEED:MEDIUM
LIFE POINTS:12
SPIT WAD STRENGTH:3
SPIT WADS:20
SPIT WAD SPEED:MEDIUM
GAS MINE STRENGTH:3
GAS MINES:3

Subdermus Beetosis
BEETLE SPEED:MEDIUM
LIFE POINTS:10
SPIT WAD STRENGTH:3
SPIT WADS:15
SPIT WAD SPEED:MEDIUM
GAS MINE STRENGTH:3
GAS MINES:4

Beefus Larg-beetus
BEETLE SPEED:SLOW
LIFE POINTS:25
SPIT WAD STRENGTH:4
SPIT WADS:10
SPIT WAD SPEED:SLOW
GAS MINE STRENGTH:6
GAS MINES:6
```



You can then choose one of six backgrounds to play on, though this makes little difference to the gameplay. Now you just try to destroy your opposing beetle by shooting at it and dropping mines. To make life more interesting there is "Allied Support" which is a butterfly that drops a package of goodies such as a first-aid kit and extra bombs occasionally, the first beetle to the package gets the lot.

Then you have "Air Raids" which translates to a bumble bee dropping bombs on both of you. However, there are also piles of beetle dung that you can hide in, if that sort of thing turns you on. As I pointed out earlier this is definitely not my type of game but I am sure there is some fun to be had out of this little number, somewhere. ★★★☆☆

PD Utilities

Our PD commentator, Steve Bye, sifts his way through a full to bursting sack of useful utilities... and what an interesting mixture of software this month provides.

★★★★★	Totally blinding
★★★★☆	Good
★★★☆☆	Average
★★☆☆☆	Substandard
★☆☆☆☆	Oh dear

Workbench 3 Explained

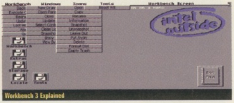
■ **Type: Tutor**

■ **Available from: Underground PD, 54, Carmania Close, Shoeburyness, Essex. SS3-9YZ. Tel: 01702-295887.**

■ **Price:£1.50**

This disk attempts to explain to the complete novice what does what in Workbench 3.

There are explanations for every single-drawer and most of the contents of your Workbench disks, the guide does also cover the Workbench menus.


Workbench
Windows
Icons
Tools
Workbench Screen
Open
Copy
Rename
Information
Snapshot
Unsnapshot
Leave Out
Put Away
Delete
Format Disk
Empty Trash
Workbench
Extras
Storage
Locate
Tools

Workbench 3 Explained

The interface used to display the guide is nice to look at and tries to replicate your Workbench 3 screen, it works quite well but it worries me that it may confuse a total beginner slightly, especially the fake Workbench menus.

Having said that the program is easy to operate and will get the user quickly on their way. The idea is that if you pull down and select an item from the fake Workbench menus a text file pops up and tells you what it is for. Similarly if you open one of the disk icons and click on files or drawers contained on the fake disks you will get the required info in the same manner. Not a new idea, but a good one. The whole point of this disk is to give valuable information in an easily

Utility of the Month...

AlphaBase V1.1

■ **Type: Database**

■ **Available from: Classic Amiga PD, 11 Deansgate, Radcliffe, Manchester M26-2SH Tel: 0161 723 1638**

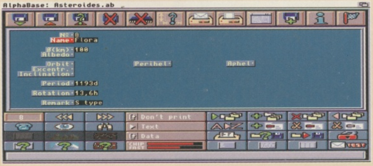
■ **Price: £1 plus 75p P&P per order.**

Initially this program looks a bit daunting, but after perusing the options, reading the docs and experimenting it soon becomes clear that this is a well presented, reasonably powerful and fairly straight-forward piece of software. Most functions that you would expect in any database program are present and are mostly easy to use, I particularly liked the export text options where you can export not just the usual standard ASCII but ASCII formatted in tables or lists relevant to the current database.

Alphabase's secondary function is as an address database, there are some excellent flexible options on how to input your address data as well as good support for printing envelopes and labels. Another nice feature is the ability to set comments, sound samples or pictures to a record. You can append and merge databases, attach files, set certain lines to be printed or not and a host of other useful and essential options. The actual database text area looks a bit flat and boring compared to the programs colourful interface but that's only a cosmetic and unimportant niggle.

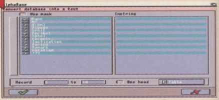
This demo comes supplied with 3 tiny databases, which leads me to conclude that Alphabase may not yet have been tested on a large database. Though this demo will only allow a maximum of 2000 records, an example file showing that the program could handle this amount of data would've been nice. In conclusion, Alphabase looks like it could be a very capable, easy to use program that is worth investigating. Recommended. ★★★★★

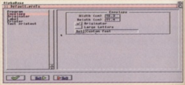
AlphaBase
Search for...

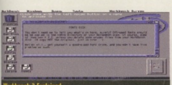

AlphaBase: Asteroides.ab

Nº 8
Name Flora
Ø(km) 180
Albedo
Orbit
Excentr.
Inclination
Perihel
Aphel
Period 1193d
Rotation 13,6h
Remark S type

8
Don't print
Text
Data
CHIP
FAST
TEST


AlphaBase
Convert database into a text
Use mask
Instring
Record
to
One head
Table


AlphaBase
Default.prefs
Envelope
Width (cm)
Height (cm)
Originator
Large Letters
Custom font



Workbench 3 Explained

digestible format, WB3 Explained attempts this but sadly fails.

Most of the information is simply a description, similar in format to what you would expect to find in the Workbench manual ie; Lacking any depth. There are very few hints and tips and most of the text is brief in the extreme. If the information was expanded 4 fold and some step by step examples included this could be a useful guide. As it stands not much of Workbench 3 is actually 'explained' any better than the supplied manual. A good attempt that with some work could be nearly there. ★★★☆☆

Photo Album V3.3a

■ **Type: Picture database**

■ **Available from: Aminet/gfx/misc/photoalbum33a.lha or from most good PD libraries.**

■ **Price: N/A**

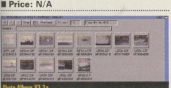


Photo Album V3.3a

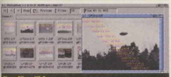


Photo Album V3.3a

A program to catalogue picture files does not immediately set my imagination on fire, but on closer inspection this one could in fact be of some use.

If, unlike me, you tend to have stacks of picture files on your hard drive and you have a difficult time keeping track of them then you can either resort to naming the files descriptively and storing them in appropriately named drawers or more sensibly use something like Photo Album.

Not only does it create a thumbnail database of your pics, it can recognise around 20 different file formats plus Datatypes (which just about covers the lot for me). But it doesn't end there. You can link Photo Album to other apps through ARexx such as AdPro, ImageFx and Photogenics, there is 256 colour support for AGA machines and Truecolur/Highcolour on graphics boards. You can also save out your catalogued pics in many different formats, which adds another dimension to the program, as well as a ton of other features.

This demo only displays your pictures in greyscale and prints 'Greyscale only demo' all over them. Most of the other useful features (ARexx, create catalogue, save etc.) of Photo Album are disabled in this demo so I cannot comment further on them. ★★★☆☆

Profile System V9.5

■ **Type: File system replacement**

■ **Available from: Underground PD, 54, Carmania Close, Shoeburyness, Essex. SS3-9YZ. Tel: 01702-295887**

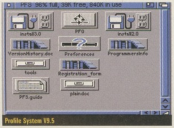
■ **Price:£1.50**

The original file system implemented on the Amiga (OFS) was very slow and needed to be improved. With Workbench 2 Commodore introduced FFS (Fast File System) which speeded things up a little and then Workbench 3 improved things further with FFS-DC (FFS with Directory Cache) which made reading disks even faster but other operations such as copy and delete slower.

Speed isn't the only problem that Amiga users have had to cope with, there's the lack of storage space on a floppy, the easily created read/write errors and of course the dreaded 'Disk not validated' error. All in all it's quite a lot to put up with. There have been attempts, commercial and otherwise, to rectify these problems with software and hardware and they have all been successful to a degree. Profile System probably isn't the best solution available but it is free and has plenty to offer. All you need to do is mount the Profile System as PF0: and use it instead of DF0:. You will then have the benefit of an extra 10% disk space on a floppy and your disks will "never get invalidated".

There are a few drawbacks though. Nobody will be able to read your PFS disks unless they have PFS mounted on their system, PFS disks are not bootable and Workbench 2 or better is required. The only real negative point there is that PFS disks are not bootable, the other two points would apply to most similar file systems anyway.

You can mount PFS on a hard drive partition, the never invalidate disk feature makes this a godsend, but the downer is a restriction to a maximum of 32 Meg for your partition. The next version of PFS promises to overcome this but if you want that you will need to register with the author. In its current form I don't think PFS offers quite enough, but if the promises of more and better features come to fruition then PFS will be worth keeping an eye out for. ★★★☆☆



PFS 96% full, 39K free, 840K in use

Profile System V9.5

Best of Aminet

The Aminet has been ringing to the sound of Doom clones this month. Pop into game/shoot to try out amidoom.lha (196K), amigadoom-1.10/lha (529K) and psidoom-0.6.lha (187K) if you want to make up your own mind which is the best. All are being tweaked and updated, so keep an eye open for the latest king of the hill. If you are one of the many who are staying up into the wee hours playing Final Fantasy 7 on the Playstation, hop on over to game/hint/ff7-faq.lha (216K) and maybe you'll get your life back this side of July.

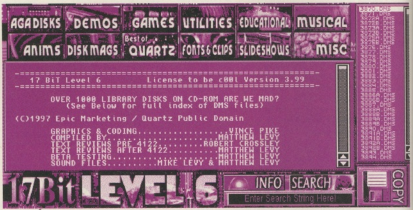
If shooting computer opponents leaves you cold, how about teaching them to talk instead? misc/misc/HAL9001.lha (64K) is a learning response engine in the Eliza mode, but even more annoying. It's a long way from being as smart as it's namesake in the film 2001, though – I still can't get it to sing "Daisy, daisy".

There are a lot of bits and pieces of software to keep track of these days. Hopefully OS3.5 and further OS developments will give us a snapshot of officialdom which leads to us all being able to cut out some of the million libraries and so on we all have installed on our Workbench, but until then it's a good idea to make sure you know exactly what is going on, so check out docs/lists/DevGuide.lha (65K), docs/lists/DTypeGuide.lha (67K) and docs/lists/LibGuide.lha (185K). The latest versions of these documents should keep you up to date with all you need to know. Got one of them PPC thangs yet? Great, but just how far does it go? Now you can find out by visiting util/misc/DhrystonePPC.lha and find out. A clue – it's pretty damn fast.

Time to get onto the all important issue of pleasing the eyes, and this month a particularly tasty demo has appeared on the Aminet. Check out demo/aga/ast-everything.lha (2.6Mb) for some brilliant 3D routines in demo team Venus Art's stunning Everything Dies. If you prefer your images to stand still then make your way over to this month's picture of the month, pix/trace/caffe.jpg (166K) by Edgārdo Rosatti, which wins out for the simple reason that it makes me want some. No time for more downloads, I've got to put the percolator on!

CD-ROM Scene

Two more CDs get the once over from Andrew Korn, who is getting bloody sick of those Tamigotchi things...



```
-=============================================================-
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-=============================================================-

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       COMPILED BY......................MATTHEW LEVY
       TEXT REVIEWS PRE 4122..........ROBERT CROSSLEY
       TEXT REVIEWS AFTER 4122..........MATTHEW LEVY
       BETA TESTING.....................MATTHEW LEVY
       SOUND FILES..........MIKE LEVY & MATTHEW LEVY
```

```
3870.DMS
3871.DMS
3872A.DMS
3872B.DMS
3873A.DMS
3873B.DMS
3875A.DMS
3875B.DMS
3876.DMS
3877.DMS
3878.DMS
3879.DMS
3880.DMS
3881.DMS
3882.DMS
3883.DMS
3884.DMS
3885.DMS
3886A.DMS
3886B.DMS
3887.DMS
3888A.DMS
3888B.DMS
3889A.DMS
3889B.DMS
3890.DMS
3891A.DMS
3891B.DMS
3892A.DMS
3892B.DMS
3893.DMS
3894.DMS
```

▲ Here's the front end from which you can access a veritable cornucopia of PD disks in DMS format.

17bit Level 6

■ **Available from:** Epic Marketing, Unit 22 BSS House, Area 50, Cheney Manor, Swindon, Wilts, SN2 SPJ.
■ **Tel:** 0500 131416
■ **Price:** £14.99

Quartz PD, who inherited the once famous 17bit PD library a little while ago, know better than anyone that the face of Amiga PD has fundamentally changed over the past couple of years. If the rise of the internet wasn't enough to make the old fashioned form of floppy disk distribution appear under threat, the arrival of CD-ROM as a standard rather than an unusual part of the Amiga owner's set-up has certainly changed the face of the industry.

In past years, Amiga owners bought floppy disks from the PC libraries by the hundreds. I am sure none of you need telling that the PD/Shareware scene on the Amiga is one of the best reasons for sticking with it, but these days most people have as much access to it all as any PD library does.

Why browse through a catalogue of hundreds and hundreds of disks to buy a dozen or two floppies when you can just order a CD-ROM and have more shareware than you could fit on a pile of floppy disks you couldn't reach the top of? It hasn't been unusual for PD libraries to just give in and go the way of the CD-ROM themselves.

Quartz PD have gone this way too, but there is something about this particular collection which owes its heart and soul to the traditions of the PD library.

There is a collection of software ready to run from the disks in the normal way for a CD, which is a solid enough collection of games, utilities and so on, but in the end is nothing you can't get elsewhere. Far more intriguing is the PD disk collection. Quartz have put about 600 disks worth of their best PD in DMS format on the CD, and include a rather excellent catalogue of the collection with write-ups on the disks, and will generate the disks at the click of a button.

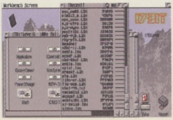
There is even a search engine, which does a reasonable job of helping you find your way around. When it comes to dumping software en masse onto a CD, it is hard to give something entirely new. Once you have a few disks knocking around, you've got so many gigabytes of stuff that there is likely to be huge overlaps. This CD, like so many anthologies, suffers very badly from this. On the other hand, with so much data at hand, you can't possibly have the time to try it all for yourself, which makes the fully catalogued PD disk collection a lot more interesting that it might at first sound.

I can't say I'm too enamoured by the concept of a CD full of files that have to be dearchived to floppy, seeing as it is perfectly feasible to de-archive DMS files to HD if you like. However it is presentations like this that supply the added value for a CD compilation it needs to have if it wants to offer something tempting. **81%**

Virtual Computer Pets

■ **Available from:** Epic Marketing, Unit 22 BSS House, Area 50, Cheney Manor, Swindon, Wilts, SN2 SPJ.
■ **Tel:** 0500 131416
■ **Price:** £4.99 or free with Dpaint or any order over £25

Here's another way of getting around the problem of selling CDs which are little more than collections of PD – theme it and sell it cheap. The theme of this disk is virtual pets, the computer equivalent of Tamigotchi, the craze which has lead sane people the world over to thoughts of electronic animal cruelty. I have to admit I treated this disk with some trepidation. My previous experience of virtual pets was not a happy one.



Our publishers handed some around the office at Christmas, and my attempt to train the one I was given to become a drug dependent psychotic killer who would assault other electronic equipment in exchange for a few jabs on the medicine key failed when the LCD beast escaped and went on a murderous rabbit slaughtering spree in the new forest.

However the pets on this disk are kept safely in a drawer of their own, and number a manageable seven – there are more for PC users. The theme is followed along in other drawers, with a hacks draw full of cute Workbench hacks, and a games drawer full of the likes of Lemmings demos and MonstersAGA. It's not all about cute cyberanimals though. There are support drawers for several products Epic sell, Blitz data and Dpaint add ons for those, and an XG support drawer to go with Epic's Yamaha MU10s which will look rather familiar to anyone with CUCD 14. Ahem.

Go to view all and you will see a bunch of stuff for the Windows side of this dual format CD. As these include a whole bunch of playable anims, midis and gifs, I'm not sure why they weren't made more obviously available to Amiga users, but they are there if you look and add to the fun. Fun is the watchword here, this is a fundamentally frivolous disk. For a fiver at most, it can certainly afford to be. Well worth a few hours on a rainy day! **86%**

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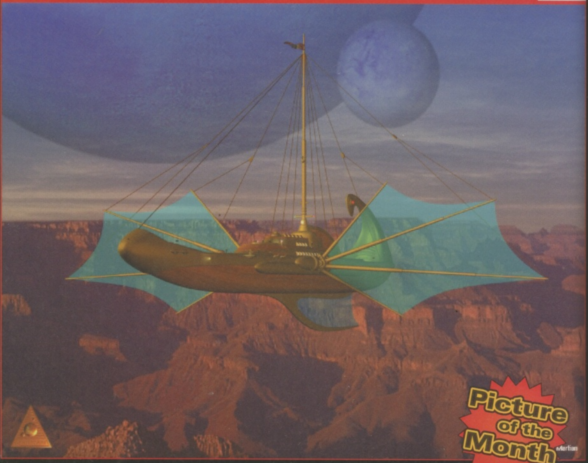
1

Solargi by Stefan König

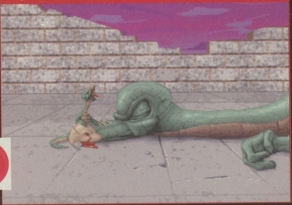


Picture of the Month

2

Untitled (ahem) by Simon Earl.

3



Depression by Ben Woods

4

MountainBlaze by Peter Devos

1. Ah, Stefan Konig returns! Stefan uses Maxon Cinema 4.0, PPaint 7.1 and XiPaint 4.0, but most importantly he uses an excellent eye for colour and lighting. I guess this one is meant to be some kind of Jules Verne style skyship – looks great whatever. Keep 'em coming, Stefan!

2. Simon produced this picture of a wood block marionette and a lego man sharing a smoke on an Amiga which according to his accompanying docs gives him no end of troubles. Update your setpatch, Simon!

What I like about this picture is that it is subtly textured and atmospherically lit. Very cosy indeed!

3. A simple hand drawn effort, done with the ever popular PPaint 6.4. An odd juxtaposition of a cartoony fantasy art and a poignant subject.

4. Oh not another bloody car render! At least this one looks rather tastier than most with a gaudy but impressive backdrop adding a little more than the normal single colour backdrops favoured by many.

The image was modelled on a portable Mac, but don't be too shocked. With a Mac version of Cinema 4D now available, Peter can use his portable for modelling work before finishing up and rendering on his Amiga.

5. Another Cinema 4D render from the Belgian lad, closer to some of the previous renders from him we have seen. Technically well polished, alas it lacks a necessary focus to make it a strong image.

5

Tunnel by Peter Devos

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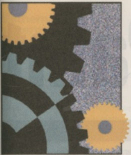

The most in-depth comms section you'll find anywhere, plus all the usual tutorials – joined this month by a brand new addition, Scala MM300.

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Part 2 of John Kennedy's graphics tutorial delves deeper into the world of ARexx and how to write your own scripts.

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Jason Hulance joins in the ARexx frenzy this month and teaches us how to understand the commands a little more easily.

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'Neil Bothwick in Heavy Metal Surf Shocker'... this month he cruises for a bats-head (or any other small mammal) to bite off.

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CU Amiga's comms expert, Mat Bettinson, shares with us the wonders of HTML tables and their more interesting uses.

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John Kennedy kicks off a new series of tutorials on this elite Multimedia/Presentation package.

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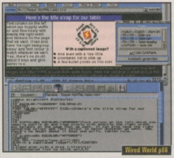
John 'F' Kennedy dodges bullets and brings you more alphabetical delights. Guess what letter it is this month?

Personal Paint 6.6 p76



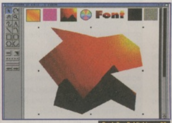
Here's the title strap for our table

Text column on the left which can happily waffle on and flow nicely with exactly the right width and balance on the page that we want. It can also have the right backgroup colour and font colour to match whatever we want. Yep, there's no doubt about it boys and girls tables rule.

With a captioned image?

- And even with a nice little
- Unorderec list to stick up
- A few bullet points on this side

Wired World p86



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Missed out on an issue? Shame! All is not lost though, as you can probably find the offending article here.

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Comments, general information, criticism, suggestions. Here's a chance to get your name up there in print.

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Life is fantastic when you take out subscribtion to CU Amiga, the UK's best selling Amiga magazine. Oh, joy of joy.

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With soap boxes underfoot, CU Amigas staff and contributors let the world know just what they think about stuff. Do *not* mess.

PART 2 Personal Paint

Tap into the hidden power of the Amiga's premier paint program using the secret weapon called ARexx.

We looked at how to go about making use of the ARexx scripts which came with Personal Paint in last month's tutorial. Now it's time to look at how to go about writing our own programs from scratch.

Controlling Personal Paint in this way is incredibly useful: not only can you automate long and tedious tasks (and so perform batch processing on animations for example) but you can also create images which would be impossible any other way.

Writing your own ARexx scripts which make use of Personal Paint's extensive image processing features is actually quite easy. You may have looked at the scripts which came with Personal Paint and thought they looked rather scary and too darn complicated to even start messing with, but don't panic.

Those scripts are pretty Heavy Duty, and you can quickly knock up some scripts of your own in a few moments. The example Personal Paint scripts are designed to work in different languages, and even search for and launch PPaint if it isn't already running: we can safely leave these aspects out of our own programs.

From the outset it's worth pointing out that you use the right kind of text editor to create your ARexx scripts. You want your text editor to save the text as plain text and nothing more: the document you save must not contain any fancy control codes for formatting or font control, as these will only confuse the ARexx interpreter.

Use ED or a dedicated text editor such as Cygnus Ed or Gold Ed to write and save your scripts. When you look at your ARexx script from the Shell window using the AmigaDOS command Type, it must be plain text and nothing else.

Linking ARexx with Personal Paint

ARexx is a fully featured programming language, with a large set of commands and functions.

When you want to use ARexx to control another program you don't have to worry about how it's done: it's automatic. The new program simply adds some commands of its own to ARexx. In fact, every time you include a command which ARexx doesn't immediately recognise, it looks around to see if any other application knows what to do with them. The ARexx program therefore makes use of any new commands as though they were part of ARexx itself.

But how does an ARexx program know where to look for these commands? Simple: using a special command called "ADDRESS". This command tells ARexx where to search for any new commands it may come across. The Address command points ARexx in the direction of a specific program.

Every program which is ARexx compatible has an associated host address name which is created when the program is loaded and running. Personal Paint's own ARexx host name is called "PPAINT". These host names are case sensitive, and in this case the name must be in capitals.

So if you want an ARexx program to make use of Personal Paint's features, all you have to do is include the following line at the start of the ARexx script:

```
/* An ARexx program */
Address "PPAINT"
```

The first line in any ARexx program must be a comment. That's the law: if you miss out the comment line, then unfortunately the program just will not run.

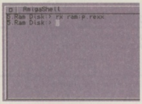
Our first program

Let's create an ARexx program which won't do much other than demonstrate that everything is working together as it should be. Our program is going to cause Personal Paint to draw a line on the screen. First of all, make sure RexxMast is running. Then open up your favourite text editor and enter the following program. Save it to Ram disk under the name "p.rexx".

```
/* PPaint and ARexx */

address "PPAINT"

DrawLine 50 50 200 200
```

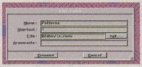
▲ Listing 1.

To run this program you have a choice. First of all, make sure that you have started Personal Paint running. You can either open up a Shell window and enter the RX command, like the example shown below:



```
5.Ram Disk:> rx ram:p.rexx
5.Ram Disk:>
```

Or else the other approach is to launch the script from within Personal Paint itself. To do this, you have to create a Macro. Right-click on the ARexx button, and select New... then locate the ARexx script file you've just created – specifically the p1.rexx file stored in the Ram Disk. You can now launch the command from within Personal Paint, or even with a shortcut keypress.



Name: Patterns

Shortcut: '

Arguments:

▲ Add your own ARexx scripts to the list stored inside Personal Paint.

Our first program doesn't do anything particularly exciting: it only makes sure that ARexx is looking in the right direction, and then calls the function which draws a line using the current brush. However, if it works then it's proof that the ARexx system is functioning perfectly.

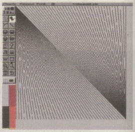
◀ The exciting result of our first Personal Paint ARexx program.

You can see there is plenty of scope for making interesting patterns when you start to add some variables to the ARexx script.

Here's a little program which will use the very same drawing function, this time using some changing values to control the start and end point of the lines.

```
/*          Draw Lines              */

address "PPAINT"

ClearImage

do x=0 to 400 by 10

    DrawLine 0 0 x 400
    DrawLine 400 400 x 0

end
```

▲ Listing 2.



▲ Using a simple loop you can quickly create a pattern like this in Personal Paint.

You can very easily adapt this program to plot graphs, which you can then copy and paste into your word processor, for example.

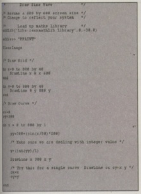
Mathematical patterns

Here's a pretty wacky idea which you can have great fun with. How about using Personal Paint to plot mathematical formula? The patterns which various functions create can be used either as an end in themselves. For example, you might need to plot a Sin curve for your maths homework, or create some accurate graphs for a business report. Alternatively, you might simply want to produce a mathematical pattern as the basis for a picture.

Although ARexx doesn't support any transcendental mathematical functions in the sense that they are "built in", it's not particularly difficult to add them. This is because ARexx also supports the idea of libraries, which can be added to provide extra functions. (Yes, yet another amazingly useful and powerful feature, and yet another reason why ARexx should have dominated the entire world).

In this case, we'll use the library called "Rexxmathlib.library". I found this library on a very old Aminet CD-ROM, so you shouldn't have much trouble in tracking it down. All this library does is add the usual array of mathematical functions (sin, cos and so on) and makes them available to ARexx programs.

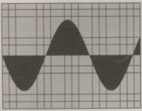
Here's a simple program which draws out a sine curve, as well as a grid on the Personal Paint screen. Trying to draw such an image by hand would be extremely difficult, and for that reason alone you can see how useful ARexx can be.



```
/*      Draw Sine Wave              */

/* Assume a 800 by 600 screen size */
/* Change to reflect your system   */

/*      Load up maths library       */
addlib('libs:rexxmathlib.library',0,-30,0)

address "PPAINT"

ClearImage

/* Draw Grid */

do x=0 to 800 by 40
   DrawLine x 0 x 600
end

do y=0 to 600 by 40
   DrawLine 0 y 800 y
end

/* Draw Curve */

ox=0
oy=300

do x = 0 to 800 by 1

   yy=300+(sin(x/80)*200)

   /* Make sure we are dealing with integer value */

   y=(int(yy)/1)

   DrawLine x 300 x y

   /* Try this for a single curve  DrawLine ox oy x y */
   ox=x
   oy=y

end
```

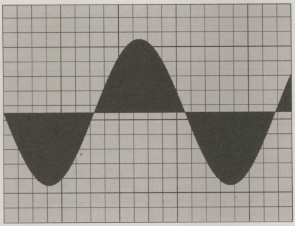
▲ Listing 3.

I've been playing around with various mathematical functions to create patterns. One thing is obvious: ARexx isn't the best language for this, as it's rather slow – however, the results make the experiments very worthwhile. One book which I found invaluable was "Computers, Patterns, Chaos and Beauty" by Clifford A. Pickover (ISBN 0-86299-792-5). This is a book which I recommend to anyone interested in mathematics, computer programming and graphics. It will keep you occupied for months.

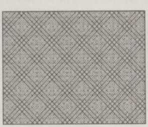


▲ This smooth curve was generated with one simple function.

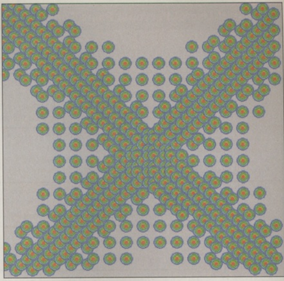
I've adapted one of the pattern generating algorithms in Pickover's book into an ARexx script. Here it is. You'll notice that as before the first thing it does is load in the maths library. After that, it works its way through two loops doing some sums and plotting the results. Feel free to experiment with the constants defined at the beginning (b1,b2,a and g).



▲ Listing 4



▲ This pattern is an ideal starting point for some useful texture effects.



▲ These pictures were made by adjusting the values used in the previous listing, and defining a new coloured brush before running the ARexx script.

Of course these two programs are only suggestions: there are plenty of other functions you can experiment with. Remember fractals and Mandlebrot sets?

Why not have a go at generating some of those shapes, or even three dimensional graph plots. Have a look at some maths textbooks for interesting functions to experiment with. Remember too that the DrawLine function is being horribly misused in these examples.

By default it will draw a single point, but instead try changing the brush to see what happens. Cut out a small brush containing different colours and then see the difference that makes.

ARexx and Brushes

You aren't limited to drawing lines of course: the ARexx commands available include functions which deal with brush, images and even entire animations. It's straightforward to write an ARexx script which can quickly apply a certain image processing filter to the current brush for example. Scripts like this can be very useful when writing games – when you need to zoom or rotate a sprite – and doing it manually would either be impossibly tedious or too fiddly to get it right.

We haven't even touched on the possibility of using ARexx to control programs other than Personal Paint, but it's entirely possible. If you use The Art Department for example, you might like a particular image processing function. You can then write an ARexx script which uses Personal Paint to load an animation, split it into frames and pass them to AdPro for further processing.

Alternatively you can try something more advanced, such as using the excellent astronomy program Distant Suns to provide raw astronomical data via its ARexx port, which you can then pass to Personal Paint in order to create graphs and charts.

Personal Paint could well be the most useful and powerful Amiga program you'll ever possess, and with ARexx, it can become the heart of your multitasking system! ■

John Kennedy

Table of Useful Personal Paint Commands

Remember that you can see the list of ARexx commands which Personal Paint makes available from the Help option, itself launched from the ARexx tool. Here is a list of some of the more useful ARexx commands.

```
AddFrames FRAMES/N POSITION/N BEFORE/S AFTER/S
```

Add new animation frames to a project. You supply the number of frames and where you want them to start. The Before/After switches let you insert them before or after the named frame.

```
ChangeBrushBkgToFrg
ChangeImageBkgToFrg
```

Swap the colours making up the current image.

```
ClearFrames FROM/N TO/N
```

Clear — not delete — the range of animation frames specified.

```
ClearImage
```

Erase the current image to the background colour

```
DrawCircle CENTERX/N/A CENTERY/N/A RADIUSX/N RADIUSY FILL/S ERASE/S COMPLEMENT/S
DrawCurve X0/N/A Y0/N/A X1/N/A Y1/N/A X2/N/A Y2/N/A X3/N/A Y3/N/A ERASE/S COMPLEMENT/S
DrawDots POINTS/A ERASE/S COMPLEMENT/S
DrawEllipse CENTERX/N/A CENTERY/N/A RADIUSX/N/A RADIUSY/N/A FILL/S ERASE/S COMPLEMENT/S
DrawFreeHand POINTS/A FILL/S ERASE/S COMPLEMENT/S
DrawLine X0/N/A Y0/N/A X1/N/A Y1/N/A ERASE/S COMPLEMENT/S NOFIRSTPIXEL/S
DrawPolygon POINTS/A FILL/S ERASE/S COMPLEMENT/S
DrawRectangle X0/N/A Y0/N/A X1/N/A Y1/N/A FILL/S ERASE/S COMPLEMENT/S
```

Common drawing tools. All use the current brush!

```
FlipImage HORIZONTAL/S VERTICAL/S
```

Reflect the current image in either axis.

```
GrabScreen TITLE ADDRESS/N
GrabWindow TITLE ADDRESS/N ACTIVATE/S
```

Build your own macros to take snapshots of other Amiga programs.

```
LoadAnimation FILE POSITION/N NEW/S APPEND/S BEFORE/S AFTER/S OVER/S
LoadAnimBrush FILE
LoadBrush FILE FORMAT CLIPBOARD/S OPTIONS/M/F
LoadImage FILE FORMAT PREVIEW/S STRETCH/S NOSTRETCH/S OPTIONS/M/F
```

Load brushes or images to memory.

```
Play TIMES/N FROM/N TO/N PINGPONG/S
PlayFile FILE TIMES/N
```

Playback animations. These commands allow you to use PPaint as a stand-alone animation playback program if you wish.

```
SaveAnimation FILE FORMAT FROM/N TO/N FULLOPTIMIZATION/S NOFULLOPTIMIZATION/S
SaveAnimBrush FILE
SaveBrush FILE FORMAT CLIPBOARD/S OPTIONS/M/F
SaveImage FILE FORMAT OPTIONS/M/F
```

After processing, you can save the brush, image or animation with these commands.

```
ScreenToBack
ScreenToFront
```

Make the Personal Paint screen jump to the fore, or hide.

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Amiga C Programming

PART 8

Last month we added an ARexx interface to our program, but the way we deciphered the commands that came from ARexx leaves a bit to be desired...

In particular, the arguments were parsed using "sscanf()", which is notoriously difficult to understand. Not only that, but there's no simple way of using it to parse Amiga-style options. So, this month we're going to set about remedying this.

Reading Arguments

You ought to be pretty familiar with the Amiga's rather friendly format for accepting command arguments and options. A simple example is the "Execute" command (in the "C:" directory): its command template is "FILE/A" (type "execute ?" in a CLI window to see this), and this means it always needs a file to be specified. A more complicated example is the "Type" command, which has the template "FROM/A/M,TO/K,OPT/K,HEX/S,NUMBER/S". Refer to the table for more details.

The job of parsing arguments according to these nice templates is done by the "ReadArgs()" function from the DOS library. Normally this is used to interpret the command-line arguments passed to a program when it is started, but it can also be used to parse normal strings (like our ARexx commands). The first example on the disks, "args0", adds the command-line parsing to "main.c" by extending the functions "createAll()" (see Example 1) and "freeAll()".

The key part of this new code is the call to "ReadArgs()". The clutter before this is to setup the array used by "ReadArgs()" to supply the results of its work. The clutter after the call is the extraction and (necessary) type conversion of the results. There's also some code to use the default values if no arguments were supplied. Of course, this last bit would not have been needed if the template contained only `always' ("/A") options, since the "ReadArgs()" call would have failed if any of the required arguments were missing.

Note that the "args" array needs to be an array of "LONG" values, but normally "ReadArgs()" stores a pointer in the array, not a "LONG" value, hence the need for the typecasts (see the table, again). In particular, the numeric option "/N" stores a pointer to a "LONG" value. An added complication is that, in our program, we need to extract the "DEPTH/N" value and then convert it to a "UBYTE". Ordinarily, it would also be a good idea to check the value was reasonable (ie; that it was within some range) and maybe give a warning and use the default value if it weren't.

Notice also that because "ReadArgs()" gives results as pointers (and it owns the destination memory), we cannot call the complementary "FreeArgs()" until we've finished using these values.

The string used for the port name, for instance, will need to remain valid until the end of the program, unless we copy it to our own memory. So, we call "FreeArgs()" in the complementary half of "createAll()" (ie; our function "freeAll()").

ReadArgs Benefits

So, what has this done for us? Well, it's made our program slightly more friendly and flexible. Now the user can run two versions of our program at the same time, because different ARexx port names can be used. The initial screen depth can also be specified by the user, and all this is done through a standard, friendly interface. We didn't need to cope with parsing an argument as a number or dealing with tricky string manipulations to get the port name. "ReadArgs()" did pretty much everything for us.

The style used to specify the template and the associated "args" array is worth noticing. The actual code works in a fairly generic way, relying on the group of definitions of the actual template string, the default values and the indexes for the "args" array (ie; the "ARGS" enumeration). This means that if you want to make changes to any of the specifics, you'll find all the relevant things together in one place, and not scattered too much through the file. For example, changing the name or order of the options in the template is very simple, and localised. The only non-local

Example 1

```
#define ARGS_TEMPLATE "DEPTH/N,PORTNAME"

enum ARGS { ARG_DEPTH, ARG_PORTNAME, NUM_ARGS };

#define DEFAULT_PORTNAME "HELLOPAINTER"
#define DEFAULT_DEPTH    (4)

static struct RDArgs* rdargs = NULL;

int createAll()
{
  LONG args[NUM_ARGS];
  int i;
  /* Initialise our args to NULL */
  /* (This way we will know if an argument was speci-
fied) */
  for(i=0; i<NUM_ARGS; i++)
    args[i] = NULL;
  if(openLibs())
  {
    if(rdargs = ReadArgs(ARGS_TEMPLATE, args, NULL))
    {
      char* portname = (char*)(args[ARG_PORTNAME]);
      LONG* depthptr = (LONG*)(args[ARG_DEPTH]);
      UBYTE depth;
      /* Use the default if an argument was not speci-
fied */
      if(portname == NULL)
        portname = DEFAULT_PORTNAME;
      if(depthptr == NULL)
        depth = DEFAULT_DEPTH;
      else
        depth = (UBYTE)(*depthptr);
      return createARexxPort(portname) &&
openGUI(depth,0,0,0);
    }
    else
      printf("Error: could not read arguments\n");
  }
  return FALSE;
}
```

change you'll need to make is to add some code to actually make use of any new options!

ARexx Commands

Now we've coped with using "ReadArgs()" in the normal way, we'll move on to using it to parse arbitrary strings. The second example, "args1", extends the ARexx message handling code (in "idcmp.c") to use "ReadArgs()" for deciphering the ARexx command arguments.

We've also separated out the command name parsing and used "strnicmp()", which now allows the command name to be specified (in the ARexx script) using any upper- or lower-case letters. The main parsing code has been factored into the function "isCommand()" (see Example 2).

The difference from the normal use of "ReadArgs()" is the addition of our own "RDArgs" structure (the variable "myrdargs"). This holds the string to be parsed, as well as some other information. It must be allocated using "AllocDosObject()" and initialised appropriately before each call to "ReadArgs()". In fact, we can actually use the same "RDArgs" structure each time, so we only need to allocate it once, at the beginning of the program (and free it at the end).

Example 2

```
/* The result of a ReadArgs() while parsing commands
*/
static struct RDArgs* rdargs = NULL;

/* Test if a string matches a command, using
ReadArgs() */
static int isCommand(char* text, char* comm,
                     char* templ, LONG* args)
{
  int clen = strlen(comm);
  if(strnicmp(text, comm, clen) == 0)
  {
    /* Is the command followed by some whitespace? */
    if(text[clen] == ' ' || text[clen] == '\t')
    {
      int tlen = strlen(text);
      /* Set up our myrdargs so we can use ReadArgs()
*/
      myrdargs->RDA_Source.CS_Buffer = text+clen+1;
      myrdargs->RDA_Source.CS_Length = tlen-clen;
      myrdargs->RDA_Source.CS_CurChr = 0;
      myrdargs->RDA_DAList = NULL;
      myrdargs->RDA_Buffer = NULL;
      /* Temporarily end the string with a return...
*/
      /* (Needed to get ReadArgs() to work properly)
*/
      text[tlen] = '\n';
      rdargs = ReadArgs(templ, args, myrdargs);
      /* ... now we must reinstate the string's termi-
nator */
      text[tlen] = '\0';
      return rdargs != NULL;
    }
  }
  return NULL;
}

static void freeCommand()
{
  if(rdargs)
  {
    FreeArgs(rdargs);
    rdargs = NULL;
  }
}
```

Example 3

```
/* Our RDArgs structure for use with ReadArgs() */
static struct RDArgs* myrdargs = NULL;

int createArgs()
{
  if(myrdargs = AllocDosObject(DOS_RDARGS, NULL))
  {
    /* Disable prompting on stdin when "?" is the
argument */
    myrdargs->RDA_Flags = RDAF_NOPROMPT;
    return TRUE;
  }
  else
    printf("Error: could not allocate args for ARexx
commands\n");
  return FALSE;
}

void freeArgs()
{
  if(myrdargs)
    FreeDosObject(DOS_RDARGS, myrdargs);
}
```

This is the role of the functions "createArgs()" and "freeArgs()" (see Example 3), which are defined in "idcmp.c" and called in the appropriate places in "main.c". The significant thing to notice is the initialisation of "RDA_Flags" to "RDAF_NOPROMPT". This prevents the prompting on standard input when "?" is specified as an argument (a feature that is very useful for the normal, command-line use of "ReadArgs()", but does not make sense for ARexx commands).

The ARexx message handling code in "doARexx()" is quite similar in structure, but it now uses "isCommand()" and the corresponding "freeCommand()" (see Example 4). Notice also that we've separated the stuff for the command names and argument templates into a group of definitions, in the `easy-to-update' style.

Another change is the addition of a "NEW" command, which also makes it on to the "Project" menu (with associated changes to "menu.c" and "doMenuPick()"). All this does is clear the canvas, ready for a new work of art (see the "test2.rexx" script to see it in use).

The extraction of the results of "ReadArgs()" from the "args" array is done in the same way as before. The interesting new bit is the main part of the "isCommand()" function (look at Example 2, again).

The manipulations done here are pretty straightforward: the command "text" is checked, and if the command name part matches the supplied "comm" then any "templ" arguments are read (and the results are stored in the supplied "args" array). A space or a tab must separate the command name from its arguments, otherwise it's very difficult to distinguish similar command names!

One `feature' of "ReadArgs()" which is pretty annoying is the requirement that the string to be parsed must end with a return character. Programming often involves working around little design flaws like this, so it's quite realistic for us to deal with this one in this tutorial. The solution we've used in "isCommand()" is very subtle (almost verging on a `hack').

We've made use of the fact that the amount of text to consider is specified to "ReadArgs()" using the "CS_Length" part of "myrdargs", so "ReadArgs()" does not require the string to be null-terminated. Hence, we can temporarily turn the existing null into a return for the purposes of our call to "ReadArgs()". So long as we remember to reinstate the null after the call to "ReadArgs()", no harm will be done.

The initialisations of "CS_CurChr", "RDA_DAList" and

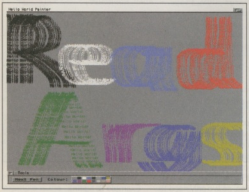
"RDA_Buffer" are necessary because we're re-using "myrdargs" and they may still contain old (and now invalid) values from a previous call to "ReadArgs()".

This is the documented way of resetting a "RDArgs" structure (take a look at the system header file "dos/rdargs.h"). Arguably these initialisations could be done in the "freeCommand()" function, since it is the call to "FreeArgs()" which invalidates most values in "myrdargs".

Next Month

Although argument parsing is a vital part of programming it's also fairly mundane. Next month we're moving on to something that's more interesting, but on the other hand more complicated. I'll be seeing you then! ■

Jason Hulance



◀ **What's the name of that function that we are using?**

Options used with "ReadArgs()" templates

Option	Description	Stored
None	Simple text option	char* - NULL if not present
/N	Number - a decimal number	LONG* - NULL if not present
/S	Switch - a boolean value	LONG - 0 for not set, non-zero for set
/T	Toggle - like /S but each occurrence toggles the value	(Same as /S)
/A	Always - modifies an option to make it required	(Depends on other options)
/K	Keyword - modifies an option to require the keyword to be specified, too	(Depends on other options)
/F	Full line - the rest of the argument text	char* - NULL if not present
/M	Multiple text - as many strings as possible from the arguments	char** - array terminates in a NULL

Example 4

```
/* The maximum number of arguments for our commands */
#define MAX_ARGS (3)
#define COMM_QUIT    "QUIT"
#define COMM_NEW     "NEW"

#define COMM_PEN     "PEN"
#define TEMPL_PEN    "PEN/N"
enum PEN_ARGS { PEN_PEN };

#define COMM_DRAW    "DRAW"
#define TEMPL_DRAW   "X/N,Y/N,TEXT/F"
enum DRAW_ARGS { DRAW_X, DRAW_Y, DRAW_TEXT };

/* Process an ARexx message */
static int doARexx(struct RexxMsg* msg, struct Window* drawwin)
{
  int going = TRUE;
  /* By default, our reply will indicate an error */
  LONG rc = 20;
  char* res = NULL;
  char* command = msg->rm_Args[0];
  /* Parse the command */
  if(stricmp(command, COMM_QUIT) == 0)
  {
    going = FALSE;
    /* We recognised the command, so set rc to zero */
    rc = 0;
    res = "Hello Painter is quitting";
  }
  else if(stricmp(command, COMM_NEW) == 0)
  {
    new(drawwin);
    rc = 0;
    res = "Display cleared";
  }
  else
  {
    LONG args[MAX_ARGS];
    int i;
    for(i=0; i<MAX_ARGS; i++)
      args[i] = NULL;
    if(isCommand(command, COMM_PEN, TEMPL_PEN, args))
    {
      /* args[0] holds the pen number to use */
      LONG* nptr = (LONG*)(args[PEN_PEN]);
      setFgPen(drawwin, *nptr);
      rc = 0;
      res = "Pen set";
    }
    else if(isCommand(command, COMM_DRAW, TEMPL_DRAW, args))
    {
      /* args[DRAW_X] and args[DRAW_Y] hold the coordinate */
      /* args[DRAW_TEXT] holds the text to be drawn */
      LONG* xptr = (LONG*)(args[DRAW_X]);
      LONG* yptr = (LONG*)(args[DRAW_Y]);
      char* text = (char*)(args[DRAW_TEXT]);
      Move(drawwin->RPort, *xptr, *yptr);
      Text(drawwin->RPort, text, strlen(text));
      rc = 0;
      res = "Text drawn";
    }
    freeCommand();
  }
  replyARexxMsg(msg, rc, res);
  return going;
}
```

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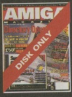
JANUARY 1997
Disks: CD-ROM or floppy edition, Imagine 4.0, Underwater Capers, plus over 100Mb of Imagine extras on CD
Features: Get a job in graphics, plus Imagine 4.0
Inside: Art Effect, PPaint 7, SWOS 96-97, Fighting Spirit, Chaos Engine 2 ...

LIMITED STOCK!

FEBRUARY 1997
Disks: Design Works, Minskies Furballs plus Worms – the Director's Cut.extras and Imagine extras on the CD.
Features: The new A/Box
Inside: Wordworth 6 Office, Turbo Calc, Minskies Furballs, Bograts reviewed.

MARCH 1997
Disks: OctaMED SoundStudio (full program) Chaos Engine 2, Chaos Engine 2 AGA demo
Features: Turn your Amiga into a pro studio. Printers: problems solved.
Inside: Quickcam, Cybervision 3D, SMD 100, JetPilot reviewed



APRIL 1997
Disks: Directory Opus 5.11 (full program). Tiny Troops demo
Features: Build your own Tower Amiga Part 1. The 50 best Amiga Games
Inside: Massive Cinema 4D 3.0 Review, new DTP series, ProGrab Sampler, Teletext Decoder

MAY 1997
Disks: Image Studio (full program) Kargon RPG, exclusive clipart on CD
Features: The Future's Bright: Gateway buys Amiga! Tower Amiga Part 2.
Inside: PageStream 3.2, Big Red Adventure, LightWave 5, Epson Stylus 600...

JUNE 1997
Disks: Pro Page 4.1 (full program) MPEGA 2.4, Sysinspector, The Sun game & more!
Features: CD-R for Amiga – cut your own CDs for a few hundred pounds plus Tower Amiga Part 3: Zorro.
Inside: Turbo Print 5, Net Connect, Cybervision...

JULY 1997
Disks: Free Net software, Quarterback 6.1 inc QB tools, Big Red Adventure
Features: Total Internet Solution, the history of the Amiga & a look at Amiga artist, Eric Schwartz.
Inside: Final Writer '97, Siamese RTG 2.0, Burn It...

AUGUST 1997
Disks: Dogfight, Turbo Print 5 Lite, Storm C Compiler
Features: Power PC is coming, Crack the Code, plus Power Gaming
Inside: Cinema 4D, Voyager NG 2.90, IBrowse 1.12 & Tower add-ons...

SEPTEMBER 1997
Disks: Sixth Sense Investigations, Vista Pro, MakePath, GeoMorph
Features: New Faces of Amiga Gaming, Amiga: The Next Generation, DIY Sound Card
Inside: Art Affect 2, Art Studio 2.5, Micronik genlocks, Flying High

OCTOBER 1997
Disks: TFX, TB 303 Emulator, Virus Z, Video Easel, Visual Prefs
Features: TFX: Quickstart Guide/Techniques & Tips etc., Suzanne: The Portable Amiga
Inside: Fusion Mac Emulator, Civilization, Mk II EZ Tower, Storm C

NOVEMBER 1997
Disks: Draw Studio 2 Lite, AIR Link Software
Features: D.I.Y. AIR Link, Aladdin 4D V5.0, Hydra A1200 Ethernet, Sensible Golf
Inside: Epson Stylus Photo, OxyPatcher, More TFX Tips, Visual IFX, Envoy 2.0,

DECEMBER 1997
Disks: PC Task 3.1, Dir Work 2.1, Workbench enhancements; icons, backdrops etc.
Features: Myst, PowerUP: First look, ISDN: The Net on speed.
Inside: Imaginex, HiSoft Squirrel CD-R, Sharp MD-MS200 Minidisc

JANUARY 1998
Disks: PPaint 6.6, Trapped 3 Demo, Sound Samples. CD Demos; Sound Probe, Foundation
Features: 1997 Review, Workbench 2000, Remixing with the Pros
Inside: Cyberstorm PPc, Picture Manager Pro, Appollo 630, Uropa 2

FEBRUARY 1998
Disks: SCALA MM300, Sword Demo, 600 Mb of Tools, Mods, Graphics
Features: Amiga Forever Emulator, The Big Switch (PowerPC), CDDA Mixer
Inside: Apple II Emulator, Distant Suns CD, Power Tower, Input Devices Round-Up

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Please allow 28 days for fulfilment upon receipt of request. All orders subject to availability.

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Net God Speaks

Things have improved for the Amiga as an Internet tool over the last twelve months. Miami has continued to be upgraded, and now there is a brand new version of AmiTCP, with some interesting looking new features.

All three web browsers have had major updates. At the start of 1997 there were no browsers with a decent frames capability, now they all handle such pages well. Mpeg streaming audio is now practical with a reasonably fast processor, thanks to MPEGA, as are animated gifs and other common features of many web sites.

The main omissions these days are JavaScript and Java – completely different animals despite similar names. JavaScript is close to release on some browsers, and may even be available by the time you read this, and a fully functional Java engine isn't too far away. There are already a couple of freely distributable, but limited, Java implementations.

It's not only software that has progressed. Wintel computers are demanding increasingly large amounts of memory and storage space, which has led to a big price drop in memory and hard drives. And tower conversions have become one of the most popular upgrades for A1200 owners, opening the door to graphics boards and fast serial cards. While it is perfectly feasible to use the Internet with an A1200, there's no doubt these hardware enhancements improve matters greatly.

Overall the Amiga has become a far more powerful Internet tool, and this progress looks set to accelerate, through 1998.

Surf's Up!

AmiTCP and Miami updates... things sure are starting to get alot busier on the TCP stack front.

AmiTCP/Miami

The pre-release versions of Miami 3.0 continue to be enhanced. The latest version at the time of writing, 2.93b, includes some initial PowerPC support.

More significant is the imminent release of the new AmiTCP Genesis. At the heart of the new NetConnect V2 CD, and based partly on the last release (4.5) of AmiTCP Professional, Genesis offers a number of enhancements over previous incarnations of AmiTCP, one of these enhancements being multi-user/ISP support.

The multi-user system allows more than one user (particularly suited to a family) to connect to and use the Internet via one computer. With a number of ISP's offering multiple e-mail addresses and even family accounts each family member will want their own configuration.

Enter your personal information, assign a password and then log into the software on startup. You can use the mail software to download your mail from your POP3 server, reply to your mail and create personal mail separate from the other mail created by other family members.

Doom

The biggest subject on the net over the Christmas and New Year period had to be Doom. ID Software, who also publish Quake, released the source of the Unix version of Doom on their web site just before Christmas. By New Year there were at least four Amiga ports of Doom on Aminet and various web sites.

DOOM
New Game
Options
Load Game
Save Game
Read This!
Quit Game

Doom

CU Amiga at WOA
AMIGA
AMIGA
AMIGA

Web TV

One web page set up to provide links for downloading the various versions and support files recorded almost 4Gb of downloads in the first week! ADoom seems to be the easiest to set up, just unarchive it, add the data file and run it. Other ports need ixemul and/or rtgmaster, being ports of Unix code.

It runs with the standard WAD data files from other versions of Doom, once you buy the registered WAD by buying a copy PC Doom, you can use any of the hundreds of WAD files available for ftp from places like: **ftp.cdrom.com.**

... Stop Press... Another Doom port has just appeared on Aminet, PsiDoom. It should be on this month's cover CD, along with the others.

WebTV

Remember the woacam from the CU Amiga stand at last year's World of Amiga show? We supplied an ARexx script so you could view the pictures as they were uploaded, with the display automatically updating. Well, now there is a proper webcam viewer for the Amiga.

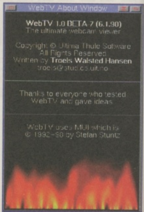
WebTV is final beta testing now and should be on Aminet by the time you read this.

You can monitor one or more sites, specifying how often it should check for updates, and it only downloads images when they change. The supplied config even includes the webcam in the author's local pub. How useful is it? Well, I'm sure someone could think of a seriously useful justification for it, but who cares, it's fun.

RC5 Update

The Amiga RC5 Team effort is still going strong. The team is still in sixth position overall, and a lot closer to fifth than seventh. Whether an Amiga cracks the key or not, this is really gaining exposure for the Amiga as a viable platform, with the Amiga team leading both Team Win32 and Team Macintosh. If you haven't done anything about it yet, go to **http://homepage.cistron.nl/~ttavoly/rc5/** now. ■

Neil Bothwick


WebTV About Window

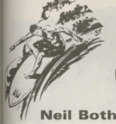
WebTV 1.0 BETA 7 (6.1.98)
The ultimate webcam viewer

Copyright © Ultima Thule Software
All Rights Reserved
Written by Troels Walsted Hansen
troels@stud.cs.uit.no

Thanks to everyone who tested
WebTV and gave ideas

WebTV uses MUI which is
© 1992–98 by Stefan Stuntz

Web TV



Surf of the Month

Neil Bothwick dusts his board off and catches a wave or three.... that's the way he likes it baby, he don't wanna live forever.

Music

Whatever your taste in music, you can find plenty of WWW sites on your favourite band, singer or whatever. Everything from official PR sites to dodgy mpeg audio files can be found from almost any search engine. Official sites can usually be accessed via the record companies' sites, but there are also a large number of unofficial sites too.

Surprisingly, for an industry so geared to appearance and image, some of the sites are truly awful in terms of presentation. For instance, the Oasis home page doesn't contain a single graphic, it's just a list, the sort of thing that even AMosaic would be happy displaying.

By contrast, other sites are much more interesting. Check out the Motorhead home page, it's a good looking site, although the part where "Lemmy Speaks... Ask him yourself" seems somewhat gimmicky. Yes, you can submit questions via a web form and see a reply from the man himself. Maybe it says something about the type of fans that Heavy Metal groups have, but the Metallica and Black Sabbath sites are also impressively constructed.

Another band with a good site is the Smashing Pumpkins. They are fairly unusual in that they also provide mpeg and realaudio files to download legally.

Demos

As with the music business, you would expect demo creators to produce visually impressive sites. As with the music business, there is a tremendous range of quality. The Amiga Web Directory has a long list of demo sites, where you can download the latest creations and find out more about the coders. If you are into the demo scene it's well worth looking at this list first.

THE SMASHING PUMPKINS
COLLECTION

CNN

Turning to more serious matters, CNN is well known as providing a comprehensive TV news service via cable and satellite channels. They also have a highly informative web site. Much of the site is US oriented, but there is a wealth of information on worldwide, European and UK issues. News, weather and sport are all well catered for.

At the time of writing this there was plenty of information on the severe weather affecting Britain and northern France. It is a commercial site, so you will find a fair number of adverts there, but they are far less obtrusive than their television counterparts.

Quake

The big news at the moment is the official licencing of an Amiga version of Quake. Announced on CU Amiga's web site before Christmas, ID Software have agreed to ClickBoom producing an Amiga version of this very popular game. You can now see previews and other information on ClickBoom's own web site, as well as finding out more about Myst and their other releases.

This site is very graphic intensive, so it could be frustrating to use over a slow link, particularly as none of the graphic links have ALT tags, so you have to wait for them to download before you can link anywhere else.

Moving pictures

Cinema fans should check out Film Threat web site. Film threat is a US based movie magazine with a good online presence. The magazine has temporarily stopped production, so the web site is now a major focus of their efforts. As well as the web site, there is also a mailing list to keep you up to date on what's happening in the film industry.

Animation fans may like to look at the AnimatED and Cartoon Studio pages. As well as downloading the latest versions of the software, and Cartoon Studio has recently been made freeware, there are links to download examples of what can be achieved with Cartoon Studio and AnimatED

■ **Neil Bothwick**

URL's

MUSIC

Metallica
`http://www2.metclub.com/main.cgi`
Motorhead
`http://www.motorhead.com`
Blacksabbath
`http://www.blacksabbath.com/sabbath.htm`
Smashing Pumkins
`http://www.smashing-pumkins.net`

DEMOS

Amiga Demo Scene
`http://www.cucug.org/amiscene.html`
Impulse Homepage
`http://members.tripod.com/~impulsed/`
Broken
`http://www.iinet.net.au/~hweight/index.html`

MISC

CNN
`http://cnn.com`
Quake
`http://www.clickboom.com/quake/`

Moving Pictures

Film Threat
`http://www.filmthreat.com/index2.html`
AnimatED & Cartoon Studio
`http://www.cybercomm.nl/~vigi/`

AWEB.1 – (No document loaded)
QUAKE
AMIGA
VAULT
NOW

Wired World

This month Mat Bettinson goes for the throat with the powerful HTML technique of 'Tables', phew!

One of the great behind-the-scenes techniques for giving structure to a web page is by using the HTML 'table'. Again we'll explain the structure of a table down to the raw HTML tags but we'll be using WebPlug to take the drudgery out of typing most of the commands by hand. A table is built up out of horizontal columns and vertical rows. The value of a table is that the browser will automatically stretch the width of cells out to fit whatever we choose to place inside them.

Let's leap in and fire up WebPlug. Create a basic HTML document as covered in previous tutorials and then make sure the cursor is in the body of the HTML document. Choose the Tables option from the Functions menu. Now click on the Automatic generation button and up the Rows and Columns to some small value and press the Generate Table button. Now you'll see in the main window that the table starts with the <TABLE> tag. Inside is the definition of the actual rows and columns. Each row is listed one by one with a pair of <TR> and </TR> tags. Inside these will be the statements for the columns.

You'll see this clearly from the code you now have in the window.

In between the lines

Of course, we don't have anything inside the table yet so it's time to put something in there. Between each of the <TD></TD> tags, place a number and count up until you have numbers in between each of the pair. Save and send the page to your browser. You'll now see the numbers ordered in a nice grid but they may be quite close together.

Insert an attribute into the <TABLE> tag so it looks like <TABLE SIZE=100%> and reload. Now you'll see the numbers nicely spread out across the entire width of the screen. This is a very handy technique so certain portions of the screen width can be given over to the entire table width or individual columns.

There are some other interesting attributes which can be added to the <TABLE> tag. Insert BORDER=5 as well as the width and reload in your browser. You may have seen this effect before, the rendering of drawn borders between the cells is all taken care of with your browser. Depending on whether we're presenting an actual table or just using a table to structure our page, depends on whether you want to use the BORDER attribute or not. You might like to experiment with the attributes CELLSPACING and CELLPADDING which are self explanatory enough.

It's possible to apply many of the usual formatting techniques inside table cells such as changing of font size and colour with the <FONT></FONT> tag pair, which can be found in the Functions/Format section of WebPlug as usual. You wont be able to use <H> style headings though and it will become apparent that great thought will need to be placed in the inclusion of pictures and so on as the row and column widths will all have to adjust to fit.

Novel uses for tables

Let's look as some very basic but novel uses for tables. One highly useful technique is to 'box out' some text just as you'll often see in CU Amiga.

This also benefits from an extremely handy function of being able to set the background colours for each of the table cells. In fact you can set the background colour for the whole table, a row or an individual cell as needs be. Here's the most basic form of boxout;

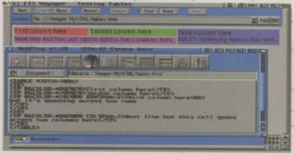
```
<TABLE>
<TR BGCOLOR=#A0A0A0>
<TD>Here we have a single-cell table with a nice grey backdrop</TD>
</TR>
</TABLE>
```

Of course normally there would be rather more text in the box. We can position the box anywhere we like with the same kind of controls afforded to inline images. For example <TABLE WIDTH=30% ALIGN="right"> would attempt to force our boxout to be 30% of the width of the screen and against the right hand side of the screen. Anything after the table would happily wrap around the left hand side of it. Note that WebPlug allows you to set the alignment with a cycle gadget from the table menu.

This might look a little funny unless we changed the colour of the background of the table and, if we really want to make it look different, you could change the font colour to contrast better on the background colour also. WebPlug will, as usual, rather handily help you choose the colours with the Workbench colour gadget.

The greatest use of Tables is background formatting of your page. This can allow a good variety of content to change around the page with floating images, blocks of text and so on which are all nicely slotted together. However it's important that we understand how browsers render tables. The amount of columns in the table is the maximum amount of columns specified.

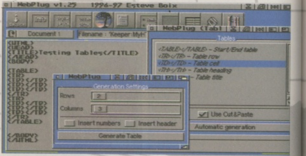
If we started off a row with only a single <TD> statement for a column but the next line had three, there would be three columns on


Voyager Testing Tables
Back
Forward
Home
Reload
Images
Find
Print
Stop
Location
file:///Keeper:MyHTML/table1.html
Add
BM
WebPlug v1.25 1996-97 Esteve Boix
Document 1
Filename : "Keeper:MyHTML/table1.html"
Document done.

First column here | Second column here | Third column here but it's spanning across two rows
Next line but this cell spans across two columns here

```
<TABLE WIDTH=100%>
<TR>
<TD BGCOLOR=#D07070>First column here</TD>
<TD BGCOLOR=#70D070>Second column here</TD>
<TD BGCOLOR=#7070D0 ROWSPAN=2>Third column here<BR>
but it's spanning across two rows
</TD>
</TR>
<TR>
<TD BGCOLOR=#D070D0 COLSPAN=2>Next line but this cell spans
across two columns here</TD>
</TR>
</TABLE>
```

▲This simple table illustrates cells spanning columns and rows



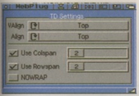
Rows: 2
Columns: 3

```
<HTML>
<HEAD>
<TITLE>Testing Tables</TITLE>
</HEAD>
<BODY>

<TABLE>
<TR>
<TD></TD>
<TD></TD>
<TD></TD>
</TR>
<TR>
<TD></TD>
<TD></TD>
<TD></TD>
</TR>
</TABLE>

</BODY>
</HTML>
```

▲WebPlug's auto generation function for tables



VAlign: Top
Align: Top
☑ Use Colspan: 2
☑ Use Rowspan: 2
☐ NOWRAP

▲ **Here we get to control the finer points of table cell attributes**

EVERY row from then on!

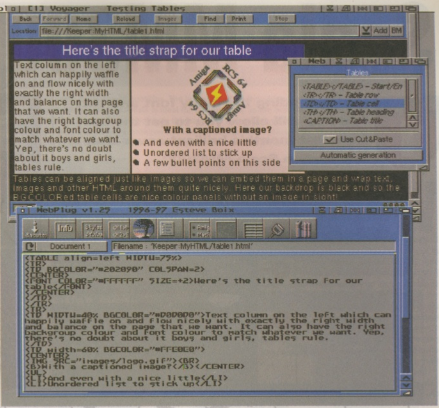
Confusing? Well it gets a little more so. Let's assume that we wanted to type across the entire top of a table but have three cells below, a heading for example. We'd need to specify that our cell was going to stretch across three columns.

This is the difference between a column and a cell, a cell may occupy as many rows and columns as we like but the rows and columns are a fixed value determined by the maximum amount we defined. We'd better have an example.

```
<TABLE>
<TR>
<TD COLSPAN=2>This is a heading across 2 columns</TD>
</TR>
<TR>
<TD>But this is one column</TD>
<TD>And this is another</TD>
</TR>
</TABLE>
```

If you look carefully you'll see that the first row only has one <TD> statement but we'd sneaked in a new attribute called COLSPAN. This makes our cell span several columns. That's right, <TD> sets a table cell definition and not a column, we can make the cell take up two columns. Why? Because the next row has a bit of text in each column and we want the top line as a heading to stretch across both.

Type this in and view it, you also might need to expand the width to 100% again to see clearly what's happening. WebPlug has the GUI elements to control the finer points of cell manipulation. Double click on the table cell and table row lines in the Table window to see the options.


[1] Voyager Testing Tables
Back
Forward
Home
Reload
Images
Find
Print
Stop
Location: file:///Keeper:MyHTML/table1.html
Add
BM
Web
Tables
Use Cut&Paste
Automatic generation
WebPlug v1.25 1996-97 Esteve Boix
Info
Document 1

Here's the title strap for our table

Text column on the left which can happily waffle on and flow nicely with exactly the right width and balance on the page that we want. It can also have the right backgroup colour and font colour to match whatever we want. Yep, there's no doubt about it boys and girls, tables rule.

With a captioned image?

- And even with a nice little
- Unordered list to stick up
- A few bullet points on this side

Tables can be aligned just like images so we can embed them in a page and wrap text, images and other HTML around them quite nicely. Here our backdrop is black and so the BGCOLORed table cells are nice colour panels without an image in sight!

<TABLE></TABLE> – Start/En
<TR></TR> – Table row
<TD></TD> – Table cell
<TH></TH> – Table heading
<CAPTION> – Table title

Filename : 'Keeper:MyHTML/table1.html'

```
<TABLE align=left WIDTH=75%>
<TR>
<TD BGCOLOR="#202090" COLSPAN=2>
<CENTER>
<FONT COLOR="#FFFFFF" SIZE=+2>Here's the title strap for our
table</FONT>
</CENTER>
</TD>
</TR>
<TR>
<TD WIDTH=40% BGCOLOR="#D0D0D0">Text column on the left which can
happily waffle on and flow nicely with exactly the right width
and balance on the page that we want. It can also have the right
backgroup colour and font colour to match whatever we want. Yep,
there's no doubt about it boys and girls, tables rule.
</TD>
<TD width=60% BGCOLOR="#FFE0E0">
<CENTER>
<IMG SRC="images/logo.gif"><BR>
<B>With a captioned image?</B></CENTER>
<UL>
<LI>And even with a nice little</LI>
<LI>Unordered list to stick up</LI>
```

▲ **Illustrating how a table can be used to create a colourful and structed web page with a minimum of bandwidth intensive graphics**

Rare and confusing aspects

A more rare aspect of modifying cell dimensions is by spanning columns as this affects what we need to but on following lines.

```
<TABLE>
<TR>
<TD ROWSPAN=2>This will span two rows</TD>
<TD>But this is just on one</TD>
</TR>
<TR>
<TD>And this is on another</TD>
</TR>
</TABLE>
```

If you're especially sharp, you might find something funny here. How come on the second <TR> row statement, we only have a single cell defined? Well, we have two columns so far because of the first row right? However, on the second row, we have no access to the first column because on the first row we said that it would span two rows. The best way to understand this is to type that in, place a little more text in the first cell, open up the width and check it out in a browser.

A very useful thing to place in tables are images but the whole effect can be spoiled by the default action to place an image up against the top left hand corner of the cell, right? There's a set of attributes to fix this also and these are VALIGN and HALIGN standing for Vertical and Horizontal align.

If we made a cell statement like this <TD VALIGN=bottom HALIGN=right> and then put an image in there with an <IMG> tag, the image would be placed in the bottom right of the cell. Most of the time you might like to use centre alignment to make things neat image wise, but for text you may need to get out the old netscapism of <CENTER></CENTER> to keep Voyager happy.

Once you understand the basic workings of HTML tables, you really can formulate just about any placement of text and images in your page that you like. The person viewing the page will be unaware of the invisible rows and columns that everything is neatly placed in.

The best bet to get on is to decide where you want things and then try generate a table to that end. With the combination of alignments, background colours, width settings and so on, this is one of the most powerful techniques in HTML there is. There's one thing to beware of though, a browser will not display a table until it is fully loaded.

This isn't a problem if your table is small but if you're whole page is a very large table with lots of text, nothing will appear until it's completely loaded. You'll see this effect quite commonly on some of the major Amiga sites such as the Web Directory. Enjoy! ■

Mat Bettinson

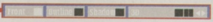
Next month – HTML Q&A

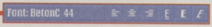
I'd like to throw next month's Wired World open to a Q&A session about the techniques we've covered so far before proceeding further. If there's anything you've not understood or any general questions you have on what's been covered so far, please E-mail them to me on mat@mats.net.

Scala MM300

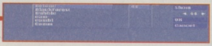
PART 1

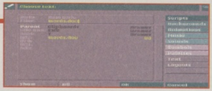
Understanding the many font and text features will allow you to get the best from last month's brilliant cover disk application Scala MM3000.

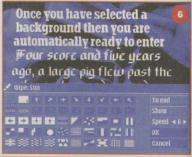

2


3

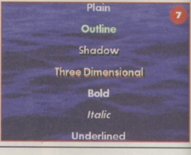
Font: BetonC 44


4


5


6

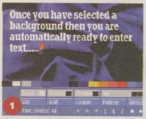
Once you have selected a background then you are automatically ready to enter Four score and five years ago, a large pig flew past the


7

Words can be the most important part of your project, so it makes sense to use them properly. Understanding the Text controls is of key importance: after all, most of your Scala pages will contain words. Exactly how your text appears on screen depends on your project. If you are creating subtitles for example, then you will want a small font displayed at the bottom of the screen. If your project is a business presentation then you will want to ensure that the text is clearly legible from a distance.

Scala provides you with a multitude of different text styles. You can change so many factors that it is easy to get totally confused. However, keep a few basics in mind and you won't get lost. What's more, your projects will look considerably more professional as a result.

When you start from an empty project, it's easy to get to the text editor window: all you have to do is create a page, and select a background. Scala assumes you want to put text on the page, and if you start typing you see text appear, as shown in figure 1:


1

Once you have selected a background then you are automatically ready to enter text.....

Once you have picked a background, you are automatically in text mode.

The control panel at the bottom of the screen contains many buttons for changing the appearance of the text. (By the way, if the control panel ever gets in your way, all you have to do is click on the right mouse button and it will vanish. Click on it again, and it will re-appear). The first four grey buttons at the top of the control panel allow you to select the colour used to display text. These four buttons (as shown in Figure 2) make it easy to adjust the colour of the text

The first, Font, is the easiest to use. If you want to change the colour which text will appear in, select the new colour from the floating palette which appears above the control panel. Next click in the coloured square inside the Front button. The text colour will then change.

Outline and Shadow work in a very similar way, but as well as controlling the colour you can toggle the effect on and off by clicking on the rest of button. This gives you complete control: you can easily create white text with a red shadow and a blue outline for example. The remaining button is multipurpose: click on the left/right selection arrows to select different effects. You can then toggle them on and off, and pick a new colour as with the other buttons. The bank of buttons in Figure 3 controls the appearance and layout of the text.

The third line down in the control panel contains more buttons for changing the text. The first is the most important, as it allows you to select the typeface used. Scala will have installed some new fonts, but you will probably already have a collection of different styles. Clicking on the font button will bring up a familiar font requester (see Figure 4). Select a font from the list of a zillion which every Amiga collects.

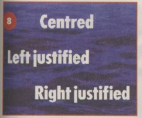
As Scala runs in interlaced video mode, a font of about 40 points or so looks good. Try to make your text as legible as possible from the outset. To help, there are six more buttons: the first three are for justifying your text. This centres it, or moves it to the left or right. The remaining three allow you to make text bold, underlined or italic, which can be useful for extra emphasis.

Sometimes you might already have the text you want to display stored on disk. If so, click on the Load button at the bottom of the control panel. From here you can select a text file, and have it displayed on-screen using the current settings. This can save a lot of time. If you click on the left/right arrows in the Load button, you'll discover that you can also save text. This load/save button can also be used with backgrounds and other Scala elements – it's a powerful feature. Use the Load button (as shown in Figure 5) to display the previously saved text.

Finally, the moment we've all be waiting for – the transitions. Almost every element on a Scala page can be animated into existence, rather than merely appearing. It's very easy to do: select the items you want to play with by clicking on them (or dragging a box around them) and then click on IN. This will bring up the transition window from where you can select your special effect. Playing with the special transition effects (Figure 6) is a good way to spend an afternoon.

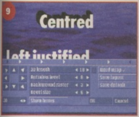
Figure 7 shows a text style summary. Remember you also have control over the typeface, size and all the colours used. Figure 8 is a justification summary. It is also possible to alter the tab positions for fine control.

When you need even more control, click on the Layout button. This brings up a whole new control panel, and although it will be a rare occurrence when you need to alter any of the settings, it's worth experimenting with. From the Layout panel you can adjust such values as the direction and length of the 3D drop



shadow. Finally figure 9 shows how the layout editor allows even more fiddling with settings. Everything is almost instant, so tinker away. ■

John Kennedy



3D length ◄ 18 ►
Antialias level ◄ 8 ►
Background raster ◄ 3 ►
Bevel size ◄ 6 ►

Top text tips

Try to resist the urge to use as many different typefaces at once as possible. As in desktop publishing, two is a good limit, with one font used for headings (or titles) and the other font for the main text.

Although transitions are great fun, having every line of text peel onto the screen in a swooping motion will soon become very tedious for the viewer.

If you want to gauge how long a piece of text should stay on screen, read it out loud to yourself twice over.

Have someone else read through your text. It's easy to miss spelling mistakes or words used twice, and an extra pair of eyes can spot mistakes you haven't noticed.

Select colours carefully, always aiming to provide a high-contrast between the text and the background. If this isn't possible, give the text a high-contrast outline.

If you are planning to record the Scala output to video tape, don't use very small or detailed fonts as the video recording process will blur them and make them hard to read. Don't use total reds, greens or blues either as these tend to smear – use slightly more pastel tones for best results.

Examples

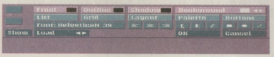
Here are some sample screens created with Scala, which all use text in very different ways. Of course, there are no hard and fast rules when it comes to design. The best you can do is watch other examples on TV and in print, and pinch the ideas.

Subtitles

Here we are using Scala to add subtitles. The image could be live video footage, combined with the Amiga output using a genlock. Scala is ideal for this purpose, as the text can be entered and then toggled through with a mouse-click. In this case, the Helvetica typeface was made to stand out by combining it with a solid white background. Use the Background option in the multifunction button at the top-right of the text control panel. You might want to switch off Word Wrap in the Layout menu too.

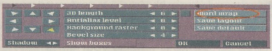
Hey, who are you calling fat?

▲ Add subtitles to your favourite home videos. All you need is SCALA and a genlock. And some home videos of course.



Font: HelveticaN 39

▲ Use the Background button with white selected to create an opaque background. For a genlock, use a solid background colour.



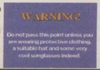
3D length ◄ 6 ►
Antialias level ◄ 8 ►
Background raster ◄ 8 ►
Bevel size ◄ 4 ►

▲ Switch off word wrap in the Layout menu, and use centred text justification.

Information sign

This example is very different: the background is generated within Scala rather than with a genlock, and because the text is important we have selected a very subtle background texture. The important word – WARNING! – is in a large font and a bright colour, and the rest of the text is plain. This makes it easy to read: anything more dramatic would take away from the message.

▶ Simple and plain. Sometimes less is more.



WARNING!

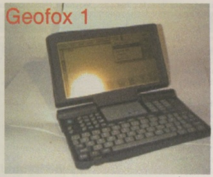
Do not pass this point unless you are wearing protective clothing, a suitable hat and some very cool sunglasses indeed.

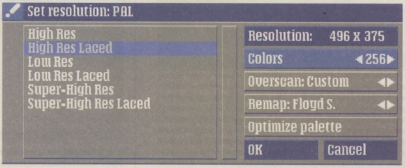
Slideshow

When creating a slideshow of images, the text is of course less important than the image. Here's a trick which will help you make the most of your pictures. Ordinarily, Scala will use the 256 colour palette with images. This is fine, unless your images happen to be quite detailed (like a photograph) or contain more than 256 colours. From the Load button on the standard control panel, select the option Other Resolution. Then click on the Remap button, and use Floyd S dithering. This gives the impression of many more colours, and works very well with scanned images.

▶ When creating a slideshow, the text is almost totally unimportant.

▼ Use the dithering options to make the most of the 256 colour palette.





Resolution: 496 x 375
Colors ◄256►
Overscan: Custom
Remap: Floyd S.

Desktop Publishing

Professional Page 4.1

PART 11

This month Larry gives you your fill of how to use the Object Attributes function in DrawStudio Lite.

The most powerful function in DrawStudio Lite is the one called Attributes in the Object menu. From here, you can add solid colour, patterns, bitmap, gradient and transparent colour fills to objects and lines (called pen colours in DrawStudio Lite). From the calls I get from DrawStudio users however, Attributes is a function that is misunderstood which is why I'm going to give CU Amiga readers the definitive guide in this workshop.

Lets start by giving you an overview of the function. The first rule to remember is that Attributes can be used at any time. In other words, you don't have to have objects selected on the page to use Attributes. This allows you to use it to create a default fill, new gradients and so on as well as apply specific fills, line endings and joins to selected objects.

Default Fills

Here is an example of how Attributes can be used to change the default fill. When you first choose the Attributes tool, the default solid fill is black.

You can change this by first making sure that no objects in DrawStudio Lite are selected and then choosing Attributes from the Objects menu. Now select a different colour from black and click OK. Whenever you create a new object, its fill will be the colour or type you chose in the earlier steps above.

Associated with default fills however, is a rule which dictates that a new object created will take on the attributes of the default fill (as outlined above) or the attributes of an object that is selected when the new object is created.

If for example, you have a red square selected on the page and then click on the square tool and create a new square, then its fill will be red, not the default colour or fill.

Raise your glass

Another common question I get is about creating transparent colours.

Think of these like a piece of coloured glass (or not coloured as the case may be) which is placed over one or more objects. A use for this is shadows where you create a transparent grey to act like a shadow for another object. Transparent colours are created when you change the Opacity of a selected colour using the Edit Colour requester. Having created a transparent colour, these can be used to create transparent gradients.

A point worth remembering about using Transparent colours with DrawStudio Lite is that although you can see the effect onscreen when you have a 24-bit display mode selected (Display requester, Settings menu), unless you have a version of DrawStudio (such as V2) that supports 24-bit printing and export, you cannot print or export transparent colours.

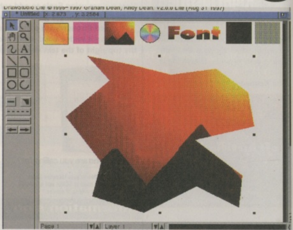
Misunderstanding

The most misunderstood concept about the Attributes function is the fill List requester, especially the one for bitmaps.

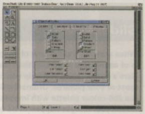
A number of people have said to me that it's too complicated but as you will see from the tutorial in this workshop, it really is dead simple to use once you understand it fully. But then again that goes for the entire program.

Take the time to understand all the various functions and the enjoyment you get from it will increase with each step you take up the tree of knowledge. ■

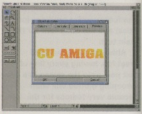
Larry Hickmott


DrawStudio Lite ©1995–1997 Graham Dean, Andy Dean. V2.0.0 Lite (Aug 31 1997)
* Untitled |X: 2.673 , y: 3.2584 |
Font
Page 1
Layer 1

▲ On the top of the page I have a number of objects with various fills. If I click on one of these objects such as the picture of the Pyramids and then choose a tool and draw a shape, that new object will also contain a picture of the pyramids.



▲ At the bottom of the Attributes requestor is a section with a series of check boxes. These can be used to select which attributes are applied to the active object or objects on the page in DrawStudio Lite.

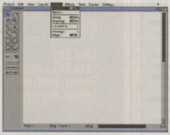


▲ One of the most useful features of the Attributes requestor is a preview so you can see how your changes effect the selected object on the page in DrawStudio Lite.

Bitmap Fills

In the following tutorial, I'm going to explain a little about creating bitmap fills with the Attributes requester. This will help you understand why the authors have implemented certain features which many see as complicated but are really just powerful features that many people misunderstand.

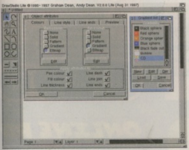
This tutorial creates two bitmap fills which can be used as the fill for structured objects and also for filling lines (pen colours).



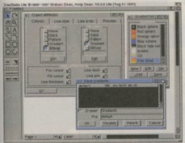
▲ 1. To start us off, with no objects on the page, choose the Attributes item from the Objects menu. The Attributes requester will be displayed on-screen.

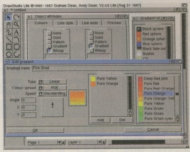
Creating a Gradient Fill

The following tutorial shows you how to create a gradient fill and then how to save it so it's always in the "Gradient List" when you use DrawStudio Lite. Because this means overwriting the Default gradient file, you may want to make a backup of it first. The default gradient file can be found in the Gradients drawer which itself is in DrawStudio Lite's drawer.

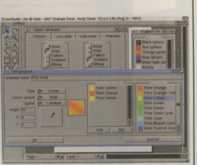


▲ 1. In the Fill Colour column, click on the Gradient radio button and then on the Edit button. The "Gradient List" is displayed. In it, will be some default gradients. Click on New and then with that item selected, click on Edit.





▲ 2. The "Edit Gradient" requester appears on-screen. Give the gradient you want to create, a name. The "Gradient Colours" list will be empty. To create a gradient, click on a colour in the "Colour List" and then click on the Add button in the "Gradient Colour" list. To create a simple gradient, you need another colour, so repeat the process of adding a colour to the "Gradient Colour" list.

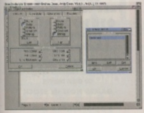


▲ 3. On the left of the requester are some cycle gadgets. Click on Type, Colour Spread and Speed until you have the effect you want. Don't forget about Angle too and also remember that you can have as many colours in the "Gradient Colours" List as you like.

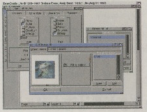
◀ 4. Click OK and you will be returned to the "Gradient List" requestor. Click on the Save button, choose the file called Default in the file requester and click OK. A warning will appear asking you to confirm whether you want to overwrite the existing (Default) file. Click OK.

5. To confirm that all has gone well, click OK and OK to return to the program and then Quit DrawStudio Lite. Run the program again, choose Attributes from the Object menu, click on Gradient and then on Edit. In the "Gradient List" will be your gradient.

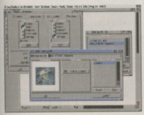
Bitmap Fills continued...



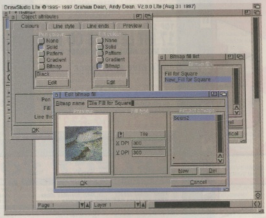
▲ 2. In the "Fill Colour" column, click on the Bitmap radio button. Then click on the Edit button. The "Bitmap Fill List" appears. This is used to display a list of the bitmap fills for your current project. Click on New and an item called "Unnamed" is created. This is your first bitmap fill.



▲ 3. The "Unnamed" bitmap fill doesn't as yet have a bitmap attached to it however. With "Unnamed" selected, click on the Edit button and the "Edit Bitmap Fill" requestor comes up. Give the fill a name and then click on the New button. From the file requestor, choose a picture to be used as your fill.



◀ 4. The default "Fill Type" is set to Object which we will leave for now. Click OK. You will be returned to the "Bitmap Fill List". Click on the New button and the "Edit Bitmap Fill" requester will be displayed again.



Black

Fill for Square
New_Fill for Square

Bitmap name: Tile Fill for Square
X DPI: 300
Y DPI: 300
Seals2

▲ 5. Give the fill a new name and change the "Fill Type" to Tile and alter the DPI in X and Y to any figure you like. When you enter the DPI figures, type a figure into X, press the Tab key and type a figure into Y. Then press the Return key so the figures are applied to the bitmap. Click OK. In the "Bitmap Fill List" you now have two fills which make use of the same bitmap but in different ways. This can be used further because you can alter the DPI settings to change the way the Tile is applied to other fills using that bitmap to create different fills with the same image. Being able to give each fill a name also allows you to create names for the specific object it is being applied to.

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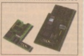

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CU AMIGA MAGAZINE

Q&A

No matter what the level of your technical problems, if you put them to our experts they'll try their best to fathom things out. Also, please remember to provide us with as many details on your systems and problems as possible, to help us in helping you.

Logos

Mysteries and meanings ...

WORKBENCH	Solutions to those everyday troubles with your Workbench.
EXPANSION	If you need help getting more from your Amiga, just ask!
COMMS	All your Internet and general comms problems swiftly solved.
SOUND	Trouble making your Amiga sing? We've got the answers here.
HARDWARE	Technical matters beyond the scope of plug-ins and plug-ons.
SOFTWARE	Answers to queries on particular pieces of software.
HELP	General queries which just don't seem to fit in anywhere else.
CD-ROM	Specific help with CD-ROM solutions and driver problems.
GRAPHICS	Problems with art and design? Help and advice is at hand.
PERIPHERALS	Printers, monitors, we'll solve your peripheral blues for you.

Over overclocking

I have an A1200 with a 540Mb hard drive and 8Mb fast memory, and after seeing your recent tech tip on overclocking processors, I wondered if it would be possible to buy a cheap 25MHz 68030 and clock it up to 50MHz. It should work because the Blizzard 1230 runs at 50MHz and that has an 030 processor.

Ted Barnes via e-mail

If it was as simple as that, why would anyone produce cheaper 25MHz accelerators? The cost of the crystal is the same whether it is 25 or 50MHz. The point about overclocking is you are running the processor at a faster speed than the one the manufacturers recommend as being safe.

Processors are tested to the marked speed for reliability, but not over that speed. In some cases CPU speeds are determined by testing the individual unit to find out what it is reliably capable of – in such cases overclocking is inappropriate. In addition to all this, a processor runs cooler at 25MHz than it does at 50, so the manufacturers may have used a cheaper chip housing which isn't up to the higher temperatures produced when it runs faster.

In short, it might work, but we wouldn't do it. In the tech tip article you mention, we listed what speeds we consider to be reasonable targets, based on practical knowledge and empirical experience. Frankly, given the difference in cost between 25 and 50 MHz boards, I would think you would be wasting a lot of effort and risk for a minimal financial saving.

Them old PSU blues

I have a Commodore A1200, Wizard Developments 68030EC/40MHz, 68882 FPU, 16Mb RAM, 340Mb IDE hard drive, Squirrel SCSI and 2x CD-ROM drive.

My setup has been working fine for some time until last week, when my A1200 started taking several attempts to boot up, due to it re-setting itself and the hard drive slowing down. This problem is not limited to start-up, but can occur at any time (usually within 10 minutes of start-up, but not always).

This doesn't appear to be a software problem as the whole thing resets with no screen freeze up or Guru's displayed. I assume that the problem is either with my power supply or my hard drive, but please could somebody with more experience advise me. If this is a Max Transfer problem with my Hard drive, I don't seem to be able to find any way of altering this with HDToolbox.

Ian Treasure via e-mail

As a general rule, if a problem occurs which hasn't been happening before, you've either changed something in software or some piece of hardware is playing up. You are right in identifying the hard drive and the Power Supply Unit (PSU) as being the most likely cause, but there are many others.

A sudden "hardware" crash such as you describe could be caused by a slightly loose accelerator board, for instance. However the fact that you state it is particularly bad during start-up suggests it is a problem with some part of the hardware which is particularly sensitive to boot-up. During boot-up the hard drive accesses a lot, but that does also mean that the hard drive draws power from the PSU a lot.

I think that it is almost certainly the PSU that is your problem. You don't mention the hard drive misbehaving in other ways – frequent read write errors or the like – and the symptoms you describe are characteristic. PSUs, especially with a reasonably kitted out Amiga like yours, suffer a lot of strain and deteriorate over time.

Try borrowing a PSU from someone else if you want to make sure, but it looks to us like time to get a new one. Maxtransfer rate should usually be left alone – it worked at the current rate before, it should still be OK.

Big hard drive

I am a happy A1200 owner and am considering setting up a BBS. The problem is that at the moment my A1200 is only using a 120Mb hard disk. I've thought about upgrading to somewhere in the region of 4Gb but have noticed

Windows NT Workstation
AMIGA

▲ Siamese faces competition from Amiga Forever.

that all the ones in this magazine are around the £400 mark. I couldn't understand this as the hard disks in the PC magazines are as little as £150 for a hard disk that size.

Is there an easy way to use a 3.5" IDE hard disk in an A1200? Is it at all possible to connect a 3.5" hard disk to an Amiga? The specific hard disk I have picked out is a 4.3 Gig Quantum bigfoot but I realise this may be too large to run off the IDE power supply. Thanks for your help.

David Wood via compuserve

Yes, it is easy to use a 3.5" hard drive on an A1200, but not totally straightforward. The cabling is different, and some hard drives are more appropriate than others.

Amiga dealers do tend to be more expensive for things like this than PC dealers, but there is a reason. Look at the prices in this issue of the mag and you will see that your £400 price point is easily beaten – something around the £200 mark being more normal. This is still a little more expensive than you will find in a PC mag, but you're probably getting more.

You will usually find that an Amiga dealer will supply you with a 2.5" to 3.5" converter cable, a mounting kit, full instructions and an installation disk. Some, such as Wizard Developments (tel: +44 (0)181 303 1800), supply formatted drives with a software bundle preinstalled. Buying from a PC dealer will get you a drive with no cables and no software. It may not be an ideal drive to use with the Amiga.

You're pretty unlikely to get a shred of technical help or advice either. Check to see what extras you get in the packages offered by Amiga dealers and then decide whether it is worth the extra – you will probably find it is.

Houston we have a problem

Would you please answer my questions on the Apollo 1240 card? I am planning to buy it from Eyetech but they never reply to my e-mails about the card.

1. How many SIMM slots does the card have?
2. Is it compatible with the A1200 PCMCIA port if has more than 4Mb of memory on board?
3. Will my standard A1200 power supply do?

I have a 2.5 inch hard drive, a 2 speed CD-ROM drive with its own power supply, a squirrel SCSI interface and a second disk drive.

4. A review of the card on the Pure Amiga website said that double sided SIMMs will not fit in it, is this true?
5. These two questions have nothing to do the other questions but, after a while of usage my squirrel SCSI heats up, is this normal? Also, sometimes when my hard drive has not been used for a while it makes a few whirring noises and beeps and after that it starts up or if its very bad it keeps on whirring and beeping. The hard drive is a 2.5 inch 120Mb Quantum. I would be delighted if you would answer my questions.

Yours faithfully,

Alister Geary, e-mail

1. One.
2. Yes. The conflict with the PCMCIA slot was a problem with earlier boards, and doesn't occur in modern 68030, '040 or '060 boards.
3. You can't tell without trying. Some people with similar set ups find the PSU OK, some find it insufficient. It depends on how reliable your PSU is and what its power rating is. There are several different PSUs that have been shipped as standard with Amigas, and they are very variable.
4. Yes, sort of. This is a physical problem of space, but some slimline designs may fit.
5. Questions like this are all too common. On the whole, if something works fine don't worry. Sure, things like this can be an indicator that something is slowly wearing out, but generally electronic parts get hot and disk drives make noises for no apparent reason.

What you should be looking for is a change in the way something works. In the case of the hard drive, it is possible that the drive is having difficulty coping with validation of the disk contents, it is worth running a disk maintenance program such as Quarterback Tools over your drive and seeing what it comes up with.

Siamese Forever?

I have recently bought a brand new Pentium II based PC but I've been with the Amiga since the days of the A500. I have decided to stick with the Amiga despite my change to a different platform and I'm looking for a way to run my Amiga software on the PC.

The way I see it I have two options:- buy one of these Siamese thingy-bobs, or buy the new Cloanto Amiga Forever emulator. To help me make my decision I was wondering if you'd answer a few questions:

1. Can I get full integration with the Siamese System, so that I can just change from one OS to the other by running a simple program?
2. Will Amiga Forever let me run OS3.1 applications and install new libraries and things?
3. Will Amiga Forever let me run those applications at PowerPC speeds?
4. Which do you think is more efficient at running Amiga software (taking into regards costs as well) on the whole?

I must thank you for helping me to stay with my all time favourite computer.

Robert Hall, Newcastle

1. The rather sexy Siamese system allows an extraordinary degree of integration, with cross platform clipboard sharing, retargetting of the Amiga display into a Windows 95 screen and allows both OS's to run side by side.
2. In theory yes, however it is only supplied with OS 3.0 and below.
3. Nothing like. Emulation is a complex business and has high overheads. Even on your Pentium II system you are unlikely to get better performance than a slow '030 and even then only with software which runs under the Picasso 96 emulation and doesn't require AGA.

Tech Tip: Give me power

Good old Commodore. Not only did they make the A1200 a real pain in the backside to upgrade properly, but they sold it with a puny power supply to make your life even more difficult when you do. Stick a hard drive and an accelerator in there and you are driving the Power supply to an early grave. Many upgraders have found their problems solved by chucking the bugger and getting a decent high power job.

Before you nip out and buy yourself a power supply unit, have a look at mini tower case prices. Mini towers come with a more than sufficient 200 watt or better PSU adaptable for the Amiga, and can be bought for little more than twenty quid.

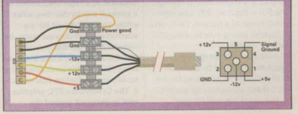
It is hard to buy a raw PSU for less than a mini tower costs. We would advise buying a cheap mini tower case even if it is just power you are after. It houses the PSU brick nicely, and can be converted to a sidecar tower later.

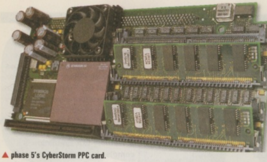
The problem is that the 5 way square DIN power lead on the Amiga is not fitted to one of these as standard. Instead they have a standard AT power connector consisting of two 6-way cables terminated in large white connectors. One of these has two black, one blue, one yellow, one red and one orange wire, and these supply all the voltages that you need.

Get an electrical terminal block from your local Tandy's or car parts shop, and connect it to the appropriately coloured wires as shown in the diagram. An Amiga power connector then has to be wired to the terminal block too. Ideally get one from an old power brick or make one by ripping the shield from a round 5 pin DIN plug.

As the colour coding in Power brick cables was not constant, we can't give you an easy guide, you will have to identify which wire connects to which pin on the plug with a simple continuity meter and connect it to the appropriate part of the terminal block. Follow the diagram carefully. The uncoated wire can be connected to the chassis of the minitower.

If all this sounds like too much work, you can ring ICS on +44 (0)1474 335294 and they should be able to sell you a power adaptor cable ready made.





▲ phase 5's CyberStorm PPC card.

4. There is really no way of answering this, the two systems are so diametrically opposite. Siamese actually has a real Amiga attached, and a well specced Amiga with ethernet Siamese retarg utterly wipes the floor with Amiga Forever on performance.

On the other hand Amiga Forever utterly wipes the floor with the competition on price. If you want your Amiga to function better than before you'll have to bite the bullet and go Siamese. If you don't mind it being a little slow and less integrated you can save money on Amiga Forever.

68k for PowerPC confusion!

I have recently upgraded my A1200 with an M1764 monitor and Blizzard 68060/50MHz with 16Mb. I also have a Squirrel connected to Reno 2X portable CD-ROM, 730Mb internal hard drive and a Goliath power supply.

I have also just bought a Micronik tower and Z3i busboard. I want to upgrade with a PPC card, preferably a 604, seeing as I have the Z3i. However, I am quite confused as to what I need to do.

1. Do I need to take the '060 off the Blizzard, rendering it useless, or does it plug onto the 604 in some way? I rang Blittersoft but ended up more confused than when I started. They told me that the 1200 '060 was different to an A4000 '060, and I would only have Zorro 2 on the Z3i.

He told me the best thing to do was buy the A4000 Cyberstorm card and use the '060 off that. Does it really matter? Will it make a big difference in performance? If I can get the 604 without an '060, as a registered owner of a blizzard, I will make a massive saving over buying a 604 with an 060/50.

2. I will eventually be getting a graphics card; will I be better off with a Picasso IV, or waiting for the card that is being built for the PPC?

3. Is it worth me upgrading to Workbench 3.1, or waiting for the new OS that is in development, I am currently using Dir Opus 5 as a Workbench replacement.

4. I want to run Mac software, but what is a snapshot of a Mac ROM, and where can I get one? What is the rough price?

Apologies for so many questions, but I really am stuck as to what the next step in my upgrade should be.

Alan Sheriff, Caslon Primary School

I can't believe Blittersoft really recommended you buy a Cyberstorm '060 to take the CPU off it and use it with a Cyberstorm PPC card, I think you may have been talking at cross purposes! Our turn to have a go at explaining this very confusing business.

1. The Micronik Z3i board has a processor slot to accept A4000 style accelerator cards. It also has a pass-through to accept A1200 style accelerator cards. However, when an A1200 accelerator is used, the board acts only as a Zorro 2 board, the Zorro 3 functionality is only available with an A4000 style accelerator fitted.

The Cyberstorm PPC 604 card can be bought either with or without a second CPU on board. If you buy one without a second CPU you can take the '060 out of your current board and put it in the PPC board. Alternatively you can buy a Cyberstorm PPC card with its own '060 processor, removing the need to cannibalise your own, which could then be sold on second hand.

Either way you're eligible for a discount as a registered owner of a phase 5 accelerator. See what prices you get offered for the alternatives and do your sums. Be warned however that your old board may be worth less than you think, '060 boards have dropped a lot in price in the last year or so.

2. The Cybervision PPC graphics card is designed around the Permedia 2 graphics chip, a much more recent generation of graphics processor than the Cirrus Logic part used in the Picasso 4.

Designed for professional graphics use, the Permedia 2 offers ultra high resolutions at excellent refresh rates, and very highly regarded 3D acceleration for OpenGL. It is attached to the PPC board via a local bus apparently significantly faster than the Zorro 3. In short, it should produce a vastly better display, especially with any future 3D software written to utilise its 3D processor. On the other hand the Picasso 4 is a decent enough card, has feature slots for sound and video cards (reviews any issue now) and has the distinct advantage of being on sale now.

3. OS 3.5 will be a software upgrade which will require 3.1 ROM chips fitted. If you don't upgrade to 3.1 you will have to wait for OS 4.0 with its new ROM chips before you can upgrade. It won't do a huge amount for your current set up on its own, so you can safely wait to see whether OS 3.5 tickles your fancy when it is released later this year.

4. The Macintosh has an OS ROM chip just like the one in the Amiga. To run Mac emulation, you need a snapshot – a download to disk – of this ROM. If you wanted to run the Amiga Forever emulator on a PC, you'd find this all taken care of, as Cloanto have licensed the ROM from Amiga International and it comes with the software. Apple however seem to have no interest

Tech Tip: Acronym alert!

Here at CU Amiga we know our readers are a pretty mixed batch. Some of you are technical gurus, some are absolute beginners. Because of this we take care to explain technical acronyms, but we do assume you know a few. We also probably get carried away now and then.

So for all those who struggle through some technical article only to founder on the rocks of some three letter obstacle, here is a quick guide to some common acronyms.

68k – 68000, 68010, '030, '040 and '060 processors from Motorola. The Family of processors used in Amigas.

AHI – Audio Hardware Interface. Retargettable audio software which allows AHI sound output to be played back through any sound hardware with AHI support.

CGFX – CyberGraphX retargettable graphics software from phase 5. Allows any CGFX screenmode to be opened on any graphics hardware with CGFX support.

CPU – Central Processing Unit. The processor chip at the heart of a computer.

FPU – Floating point unit. A co-processor which handles floating point (fractional math) very quickly. Built into most 68040 and 68060 chips.

HD – Hard drive. Also used to refer to High Density floppy disks/drives which have double the normal capacity.

IDE – An interface for hard drives, CD-ROM drives etc.

KS – Kickstart. The operating system software stored in ROM on Amigas since the A500, booted from floppy on the A1000.

OS – Operating system. The software which controls day to day operation of a computer. The Amiga has Amiga OS, PCs have DOS and Windows, Macs have MacOS etc.

P96 – Picasso 96 retargettable graphics software, a largely compatible alternative to CGFX.

PCI – The current industry standard expansion bus, similar to the Amiga's Zorro system but rather faster. Used in PCs, Macs, Unix boxes and pretty much everything else.

PPC – PowerPC processors from Motorola as used in the phase 5 PowerUp accelerators.

PSU – Power supply unit.

RAM – Random Access Memory. The memory directly available to the CPU from which software is executed.

SCSI – An interface for hard drives, CD-ROMs etc. Faster than IDE and has less demands on the CPU. Also used for connecting scanners etc.

SIMM – Single Inline Memory Module. A very common plug in form for memory chips.

VGA/SVGA – PC display standards. Most monitors are SVGA these days, Amiga graphics cards and some AGA screen modes are SVGA compatible.

WB – WorkBench. The desktop environment of the Amiga.

in licencing ROM snapshots for use in Mac emulators, and such things are not on sale.

Mac emulators for the Amiga come with a small piece of software you can run on a Mac to take a snapshot of its ROM and save it to disk for copying onto your Amiga. The legal stand on this is that it is perfectly legal to do this on the condition that the Mac the snapshot is taken from is not used while the Amiga emulator is used. It sounds odd, but the logic is that you have bought a single licence copy of the ROM when you bought the Mac and have the right to use that ROM on any computer you like, but not on two at the same time.

All this is hardly ideal and leads to a lot of people copying the ROM from someone else's Mac, or even acknowledging a ROM snapshot illegally posted on the internet. It is this practice that lead Amiga International to licence the Amiga ROM for use with Amiga Forever, rather than let the distribution happen only through pirate channels.

Earth to earth

In your May 1997 issue you had a feature about building your own tower, and in that feature you showed how to connect a PC power supply to the A1200 and stated that you don't need to have the PC power supply in a tower.

But you said that the uncoated wire in the Amiga lead should be coiled around the bolt in the terminal block so that it is electronically connected to the chassis of the tower case. I don't have a tower case (yet) so where, if possible could I connect this wire? Thanks for your help,

Lee Dyson, Birmingham

This is just the shield to earth connection. Normally a green earth wire from the power supply cabling ties the chassis of the tower case to earth, you can connect the uncoated wire to any such grounded connection. Check out the tech tip on Power Supplies first, however.

Libraries of Babel

Can you explain version number and dating of libraries and the reason why some programs fail with updated versions? I have recently updated from CUCD the Unpack, AmigaGuide and Datatypes libraries. Unpack.library, version 42.7, produces an error on startup : "Unable to identify c:setpatch. File has not been checked". Version 39.54 works perfectly.

Similarly when using version 40.6 of Datatypes, from CUCD14, on replying yes to the initCD requester concerning "new prefs program", a message comes up informing me that version 36 is required. It works fine with my old version 39.11.

L.H. Benson, Huntingdon.

Often the problem is one of OS. The version 40.6 datatypes library uses extensions to the ROM brought in with OS 3.1, so if you have 3.0 ROM they won't work, you have to stick with the older library. With other libraries there is the same story, though sometimes there are more complications.

Some libraries only work when certain other libraries are updated, and some updated libraries no longer work with older software.

There are also often unofficial versions of libraries floating around which are not as stable as they could be. Having no-one in charge of the Amiga for so long has left the legacy of libraries in a state; roll on the new official OS3.5.

How to write to Q&A

You can send your queries (or a good tech tip if you have one) to Q&A, CU Amiga Magazine, 37-39 Millharbour, Isle of Dogs, London E14 9TZ or preferably e-mail: q+a@cu-amiga.co.uk. We can accept letters or text files on floppy disk. Please do not send an SAE.

WE CANNOT RESPOND DIRECTLY TO QUERIES BY POST OR OVER THE PHONE OR E-MAIL, and cannot answer every Q&A we are sent. Sorry. We do appreciate that you may have a serious problem and until Amiga International re-open a UK office you may have no-where else to turn, but we get so many questions we simply don't have the time or resources to answer them all. We do our best to use letters in Q&A that answer most common problems, so even if your own question is not answered you may find an appropriate answer here.

A to Z

John Kennedy has long been an exponent of the F-word... here's a few he prepared earlier.

F is for...

FailAt
An AmigaDOS command, used in scripts. It displays (or sets) the conditions which will cause a script to fail, and therefore stop.

Fat Agnus
A custom chip fitted to A500 and A2000 models, so-called because it was square compared to the original Agnus. Fat Agnus supports up to 1Mb of memory: the so-called Chip Memory. It performs blitting functions.

Fastmemfirst
An AmigaDOS command present in pre-Workbench 2 systems. It patches the operating system to give Fast memory programs requesting memory, thus speeding them up. No longer needed.

Fast Ram
The Amiga has two types of memory: Chip (sometimes called Graphics) and Fast memory. Fast memory is memory which doesn't have to be shared with the custom chips, and therefore the processor can access it more quickly. Fitting fast memory to an Amiga usually doubles its speed.

Fault
An almost totally useless AmigaDOS command which returns an error message in English when provided with an error number. Probably seemed a good idea at the time.

FFS
The Fast File System used on AmigaDOS floppy disks. Hard to think of it as fast, but it is an improvement on the Old File System used back in Workbench 1.3 days.

Filenote
An AmigaDOS command which is very underused: it allows a short message to be associated with a file. The message will appear when the list command is used. Of course, the main reason it is underused is that it's not particularly useful.

FixFonts
AmigaDOS command which updates the system if any changes have been made to the contents of any of the directories in the FONTS: path.

FKEY
A Commodities utility program which allows you to assign various commands to the Function keys.

You paid bloody good money for those useless pieces of plastic with F1 and so on written on them, so you might as well use them for something.

Floppy Disk
The Amiga A1200 and predecessors comes with a Double Density floppy disk for storing data. The A4000 has a High Density disk drive as standard. It's possible to upgrade an A1200 to use a HD drive if desired. This is most useful when swapping data between PCs, as the Amiga can read PC formatted disks.

Format
Before a disk – floppy or hard – can be used, it must be prepared or "formatted". The AmigaDOS command to do this is called Format.

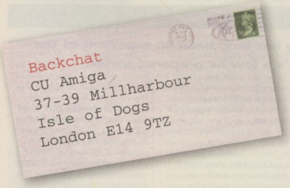
Font
A particular typeface. If you enter FONT at the Shell you will launch the Font Preferences program which lets you select the font used for icons and other Workbench text.

Frame Buffer
The area of memory which the Amiga's hardware displays on the screen. When you alter the contents of the Frame Buffer memory, the contents of the screen changes.

Function Key
Keys on the keyboard with no real purpose. Different programs may make use of them as they see fit, or you can use the FKEY utility to program your own settings.

Backchat

Isn't it time you had your say on all things Amiga? Now's your chance. Jot down your rants or e-mail them to us at backchat@cu-amiga.co.uk



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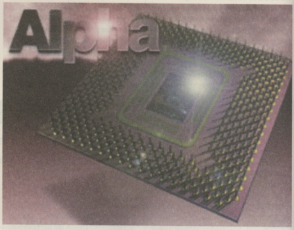

▲ CPUs: what's all the fuss about? Nothing according to Gavin Gunn.

PowerPC? Pah!

I thought that I'd write in with my views on the whole Amiga Power PC thing...

"Wow, look at this – it's an Amiga accelerator which gives the machine an additional processor with more power than even the latest Pentium IIs. And YOU can own this for a measly few hundred quid."

But why? Unfortunately, people have seen this kind of thing before in the shape of an obscure 8-bit add-on; the C64 "SuperCPU". This pushed a standard C64 up to, roughly, the processing power of a reasonable 286 PC. Hardly "amazing", but a massive increase over its standard 6502 chip. Sales of the "Super CPU" were far from astounding as you may imagine at several hundred pounds, and the odds are – in my opinion – similarly stacked against any kind of success for the PowerUp cards.

The thing is, though, that only a fool gets obsessed with actual processing power these days. Compare a 68030-based machine with 8 Mb Fast RAM running DOpus Magellan against a P130 with 16 Mb running Windows '95. Which is faster? Which looks better? It's a matter of opinion, really, but not even the most die-hard of PC fanatics could seriously claim that the PC's operating system is significantly beating a well-configured Dopus.

> **"The thing is though, that only a fool gets obsessed with actual processing power these days. Compare a 68030-based machine against a P130..."**

Alternatively, consider the pretty low power of the PlayStation's slow-by-today's-standards RISC CPU, along with its "measly" 2Mb RAM and 2-speed (I think) CD-ROM drive. In terms of CPU power, it's apparently surpassed by a "moderately accelerated" Amiga and basically all modern PCs. But nobody would claim that either of those machines could pull off the likes of Soul Blade or Wipeout 2097 with quite the ease which the PSX accomplishes the task (a fast P2 MMX would still need a graphics card & loads of RAM).

All the user cares about is what a machine can do. In my opinion people want the following from a "system"...

In joint first place comes running the latest graphically stunning games and/or a specific Microsoft/PC-only application (Lotus 1-2-3, Exel, MS Word, Netscape Navigator or even - spit - Win. '95).

Secondly, comes the smaller demand from slightly more open-minded / sensible(?) people who don't care if the software is Microsoft branded or if the computer is a PC - they just want a machine which has powerful and easy-to-use serious software, and some fun, playable games.

Lastly come the few remaining Amiga users, whose opinions and ideas seem to be completely overlooked by literally all of the large software and hardware suppliers.

OK, these groups are a bit general to say the least, but the point is that almost 80 % of the market exists under category 1, in the form of existing PC or Playstation owners. These are the people who are more likely to be spending the serious dosh on their computing "habit", and surely being able to interest (some of) these people is what will determine the success or failure of any new machine with a future.

And my point? For PowerUp to succeed it either has to run Microsoft app's and BIG games (Quake, Turok, Dungeon Keeper, Wipeout, Tekken), or do something so far in advance of any of this that it makes anyone who sees it say "I want that now!" Anything less and it's destined to obscurity.

I'll get down from my soapbox now. Bye & may CU Amiga continue whatever happens!

Gavin Gunn, Solihull

Quite right. CPUs are rubbish

Letter of the month

Well, we all seem to love the new Amiga boards coming out of Index Information lately, but one item seems to perplex many Amiga users, *the names*!!!

Access? Connect? Inside Out? BoXeR?!?!? Where do they come up with these things? Well in order to help people remember these names easier I have come up with a system of acronyms for the names of the two machines made so far, the Access and the BoXeR.

The Access is the A1200 on a 5 1/4 inch card, designed for use as a multimedia display system. It was also the first authorized Amiga clone motherboard design since the end of Commodore in 1994.

Amiga ACCESS=Authorized
Card
Computer
Enhanced
Showtime
System

The BoXeR is an Amiga 4000ish system set up to fit in Baby-AT sized clone boxes. It also holds up to 2Gb of RAM on the motherboard if you can find four 512Mb SIMMS to plug into it.

Amiga BoXeR=Baby-AT
Optimized
Xpanding to
Enormous
RAM

Well, I hope this helps people remember the names of the machines, and what they do. It made my head hurt when I got to Inside Out, so I hope Index changes the name again to something easier.

The Index Information home page is at http://www.compulink.co.uk/~index/ with more information on these systems.

Mathew R. Ignash, via email

aren't they? Let's face it, all a faster CPU lets you do is everything faster than before, and other things that would previously have been impossible. Who wants that?

OK, so there's more to performance than raw CPU power, but the difference between game consoles and computers is that computers can be put to a wide variety of jobs. You don't get a more versatile computer chip than the CPU, so for a computer the CPU performance is a lot more important. You'd soon find yourself begging for some pure number crunching power if you were limited to a slow CPU with a few bolt-on sound and graphics chips.

> "I shall be taking legal action for the emotional distress caused (and for the fact that I have now planned how to put myself severely in debt"

Big up the A600

Just a line to give my say about the possibility of PCI card slots on future Amigas and a quick moan! Also thanks for a *great* magazine, you've stuck with us, many haven't sadly!

The moan first... Please can you stop sticking the dagger in on every A600 review. Yes they are old, no they do not have the AGA chipset and yes I would upgrade *if* I had the money. But they do the job, and they are cheap and cheerful, thats enough for me at the moment. Also drop the line 'you can pick up a second hand A1200 for under a £100'. Yes but by the time you have upgraded it to anything decent its very expensive starting from fresh. I am personally waiting for one of the new Amiga clones like Power Computing clone. This would seem like a economic upgrade option, and yes A600 owners were born with common sense, just bad luck! I bought mine just before the A1200 came out, moan over.

PCI cards great, all the power in the universe! But if you look at what made the Amiga so powerful in the past, and what makes the modern console so good today is their standardised parts. Because PCs are so varied with interface types like PCI, it makes for one hell of a job making software for them, because of the shear variety of PC types out there. Do you remember Syndicate on the Amiga? Silly question! It requires 1Mb of RAM, no hard drive and no monitor – a basic Amiga effectively. What did the PC version require? A SVGA monitor, 4Mb of RAM, a hard drive and a sound card, if you wanted to hear any real sound that is. So which was the better version, the PC version needing at least 33Mhz of processing power or the Amiga with a staggering 8Mhz of processing power? Standardised parts more than likely played a massive part in ensuring Syndicate was a viable and possible release on the Amiga. Today's super consoles run at what 33Mhz? Do they, or do they not give most PCs a good run for their money and at 1/10 of the price of a PC! Ever played Destruction Derby on the PlayStation? Have you managed to find a PC for under a grand that gets close to the PlayStation's quality of overall games?

So let's pick a powerful standard and stay with it, or do you want your Amiga to be like a PC with all the power in the world, but with no means of ever really using it? It's a bit like putting a Rover V8 in a Robin Relent, nice idea, but quite useless bottom line being!

"Cookstar", via email

How many times do we need to explain the way console hardware is sold at a loss with the money recouped from the licence paid on every software sale? Once more at least, it seems. Unless Amiga International were to introduce a levy on every bit of commercial software (which isn't necessarily out of the question) an Amiga with similar specs to that of a PlayStation (plus all the other bits you'd want but seem to forget about, like disk drives, keyboards, interfaces, operating systems...) would cost a lot more than £100. That's the kind of price you could expect to pay for a PC graphics card alone.

Fish, kettles & Quake

So Quake is going to be released for the Amiga. As far as I'm concerned this is great news. People keep harping on about how we users don't support the Amiga gaming community, and like alot of other users I too haven't spent too much on any new games. My lack of interest in the gaming scene is not because I can't be arsed but because I haven't seen anything I want. Myst looks very nice but it's not really something I want to play and I suspect there are more Amiga users out there of the same opinion.

Quake on the other hand is a completely different kettle of fish, being probably the best multi user game around. I don't know about the other users out there but I will be upgrading my humble 68030 to a PPC+68040 just for the privelige of going head to head on the Internet with other Quake-miesters. Now I'm not stupid and I understand that this is something of an exception. But if like me other people find playing Quake worth the cost of upgrading their machines then maybe the gaming scene will take of again.

As for the future of the Amiga it would be nice if somebody, I don't care who, ported the Amiga OS to PPC so we can finally get out of using the 680xx series. If there are any users reading your magazine thinking of jumping ship, don't do it. At work I use a Pentium 2/300 with 64Mb of RAM and I can honestly say the only good thing about it is the 21" monitor. The hardware is a bag of sh**. They really aren't that fast and the multitasking is very poor. For example if you have Exchange, Photoshop and a web browser running that's at least 90% of your system resources used up and in my job I need these. If you run Quake on my system the highest screen resolution you can get before it

▲ The good old A600: outdated and obsolete or a miniature classic?

starts to get jerky is 800 x 600 and at that resolution playing Quake 2 is like running in a tar pit, although a 3D graphics card would make it alot better. This machine has a 4Mb open GL 3D card in it and that's crap too.

The moral of my rant is there is still time for the Amiga hardware to catch up.

We Amiga users need a whole new machine so we are not messing about adding hardware fixes such as serial ports, keyboard interfaces and IDE ports to our machines. They should be in the box in the first place.

Maybe if these things where inside the Amiga from the onset we users would have more spare cash to buy more software. We can't afford to have any more developers ceasing Amiga production. Any one noticed the Cinema 4D xl for the PC and Mac?

Ian Han, via email

We're hoping that Quake will be a catalyst for a few changes in the Amiga scene, not only for users upgrading but it may also prove to the 'outside world' that the Amiga is still here and means business.

What's the difference?

Q: What's the difference between (eg.) a 1.6Gb 3" IDE hard drive for an Amiga, and a similar drive for a PC?
A: About £50.
And it's the same for most bits of hardware, and it's a helluva lot worse for magazines:
CU Amiga £5.99, PC Shopper £1.50, and it's four times fatter. Now we all know most of the latter is adverts, but thats why it's so cheap. The point is that there is no difference in much of the hardware, so why don't you try and get some of those PC dealers advertising in CU Amiga? Run some special offers for new customers or something. After all, it doesn't need a lot of effort to support Amiga, just a small pile of software and a little bit of knowledge. In my experience, a lot of PC dealers don't know a lot about PCs anyway.

"It was good to see AI following the great Commodore tradition of failing to bring anything out in time for Christmas"

It was good to see AI following the great Commodore tradition of failing to bring anything out in time for Christmas. What are they playing at? All it would have taken would be to put the A1200 in a case with a CD and a hard drive (and preferably a SIMM socket or two, but that would need a little designing). I expect you're going to point to the Infinitive 1300 tower. £349.95 compared to £209.95 for a standard A1200, £140 for a PC case and an upgraded PSU?! My PSU cost £16 for two so that's £130 for a box! Is anyone really that stupid? I don't see why the setup I described should be more than £300. I could do it for not much more, and if it's done at source, you haven't wasted the original keyboard and case.

Keith, via email

OK Keith, do you really want us to point out the differences between CU Amiga and PC magazines? As you say, the reason they are so cheap is because they are so full of adverts. If you want a brochure, go down to PC World and pick one up for free. If you want quality, unbiased, expert editorial coverage of a subject about which you are passionate, buy CU Amiga. Then of course there's the matter of the cover mounted disks and CDs. You've obviously never sampled PC magazine cover disks or CDs. If you had you'd notice how the standards set in the pages of the magazine are continued to the disks on the cover.

And just to answer the one about PC dealers selling the same things cheaper than Amiga dealers (again) it's basically down to the laws of business. If you turnover more stock you can afford to take a smaller profit margin on each item. The PC dealers have larger turnovers than their Amiga conterparts. You are of course free to buy from whoever you choose, but without Amiga dealers, there's not going to be any Amiga scene to speak of, apart from what can be supported by the Internet.

Excitedly soiled

Please find enclosed a copy of my laundry bill, which I fully expect you to pay. My reason? I have just finished wetting myself in excitement having finished reading the Jan 98 issue. The information about the Permedia 2 was simply more than my brain (and bladder) could handle.

Added to that, you had the sheer audacity to give a £20 off offer on the Eyetech tower (which I've just sent off for – ta very much!). And don't get me started on the Computer '97 coverage. I finally saw a picture of the PowerPC card for the A1200. However, I turned back a page (I read my magazines backwards - just don't ask), and saw the Boxer. The room then went all blurry, and I woke up and found I required another change of clothing.

I am also writing to the companies responsible for producing these fine products, warning them that I shall be taking legal action for the emotional distress caused (and for the fact that I have now planned how to put myself severely in debt for the next couple of decades).

Somehow this letter seemed more amusing when I first thought of it. Shows how wrong first impressions can be!

Gerard Sweeney, via email

▲ Index Information's BoXeR is just one of the exciting new developments to come.

To the Point...

Amiga For-never?

Is this the start of the end? I couldn't believe my eyes when I read the article on the sickly titled Amiga Forever in the February issue of CU Amiga. This is PC software for God's sake! Are you honestly trying to tell us our future lies with an Amiga emulator running on a PC? This is not what I have come to expect from what I thought was a magazine dedicated to a struggling platform.

Ian James, Lincolnshire

There's no point in us ignoring what's happening out there. We haven't moved over to reviewing PC software or 'filling' the pages with PC products. This is a development that all Amiga users deserve to know about. We aim to present the facts, sprinkled with some considered opinions from those in the business in order for everyone to be better informed to make up their own mind on the matter.

Thanks for Scala!

Just a quick note to say thanks a lot for including Scala MM300 on the Feb issue. I'd never used anything like this before, but now I've already put together a number of video presentations to publicise my own small 3D graphics production company.

Gordon O'Hare, Dublin

See, we told you it was good didn't we?

Money saving tip

I've got an idea for you that might help save some cash. Instead of coming up with new ideas for features and articles, simply repeat the same old stuff that's been around in Amiga mags since the start. Or has someone else already beaten you to it?

Bob Stamford, Coventry

CU Amiga reserves the right to edit, trim and generally make sense of letters that don't otherwise, or are just too long to be published in full.

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Points of View

CU
The Monthly Expert

Time once again for some more opinions... Please note that the views expressed here are not necessarily those of CU Amiga.

An emulated Amiga may be the way forward

Does there come a time when an emulated computer is as useful as the original? If we were to cite Macintosh emulation, there would be no doubt this is true.

Macintosh software can and does run faster on ShapeShifter via a fast 68060 Amiga than it did on any 680x0 based Macintosh. Accepting this, it's then puzzling that many Amiga owners aren't coming to grips with the notion that an Amiga emulator can run Amiga software just as well as an Amiga. Heresy? Nay brother.

Precisely because the Amiga is the king of emulators itself and that it's so dear to our hearts that actual Amiga emulation is a touchy subject. Why should it be though? What actual difference does it make what hardware is used to run AmigaOS?

I've heard all sorts of lunatic arguments such as the custom co-processors enabled the fantastic multitasking the Amiga was born with. Guys, in case you hadn't noticed, the best Amigas set-ups today have the most custom chips replaced/superseded as possible.

They're 10 years old now and we need to move on. We all want the progression of AmigaOS to a new CPU and hardware and regain the cutting edge and when this does happen, our existing software will run under a form of emulation itself.

In the best case the OS itself is running natively on the hardware and only the programs are being emulated. In the case of Cloanto's officially licensed Amiga Forever, the CPU, the OS and the custom hardware is being emulated.

This is only partially helped by using native graphics in the form of the Picasso 96 RTG screen modes.

> **"I put it to you that this migration of system elements to native code and hardware is the same way the Amiga can and is moving to new hardware."**

My point is that right here and now, AmigaOS runs perfectly on another hardware platform. It's no speed demon, at about A1200 with Fast memory speed, but it has a proper hires true colour display care of any old cheap PCI graphics card – the kind of thing we've been dreaming of for years.

I put it to you that this migration of system elements to native code and hardware is the same way the Amiga can and is moving to new hardware. HiQ are touting this method for a multi-stage move of the Amiga to the DEC Alpha platform, an outrageously powerful system. Initially they plan to place Amiga hardware on a PCI card in a DEC Alpha and later a real Alpha port of AmigaOS. Phase 5 are working in a similar way with PowerUp and... who knows what Amiga International is doing but it's probably something similar.

So before your hackles rise at the prospect of an emulated Amiga, consider that it works and works well, it's getting better all the time and the techniques involved will ultimately be the only way the Amiga will get the hardware it so richly deserves.

■ **Mat Bettinson is CU Amiga's Comms Consultant.**

The infernal online Catch-up

I just downloaded the latest upgrade to the AWeb-II browser, version 3.1. Among other things, it marks the first Amiga web browser to support Javascript.

Javascript is not the same thing as Java, but it is employed somewhat liberally online to do little tricks like changing the content of the website relative to your mouse pointer and scroll text across the screen. But that's not the thing that is really important here.

It's been some time since Javascript has been readily supported by Netscape and Internet Explorer, the two major browsers on the PC and Mac. Amiga users were effectively shut out, or at least hindered in their use, of a number of websites – usually general interest or corporate sites.

All of the three major Amiga browsers have promised to deliver it, and AWeb is first to the post. This is good – for AWeb, and for us. The not-so-good part will be apparent to most of you the minute you upgrade your version of AWeb or wait for your browser of choice to catch up.

You'll get in to that Javascript-enabled site alright – and the safe money is that you'll be greeted with notification that without Shockwave, RealAudio, or any of a half-dozen other web formats the Amiga does not presently support, you will not be able to get the most out of that particular website.

> **"We get secure transfer support only to find that we don't have Javascript. We get Javascript, only to find that we still can't listen to that live concert."**

It's a nasty bargain, but one that we seem to endlessly face on the web. We wait to get frame support only to discover that we can't securely buy stuff from online vendors. We get secure transfer support only to find that we don't have Javascript. We get Javascript, only to find that we still can't listen to that live concert.

And so on. It's the unfortunate, but rectifiable, consequence of being behind the web technology curve. It can be corrected, of course. As we've seen, as long as we keep supporting the authors of Amiga web browsers, they'll labour late into the night to try to catch up.

Unfortunately, we're facing a "one step forward, and two steps back" scenario, largely because many of the formats left to conquer are proprietary – meaning a big outlay to convert them if the company offers licences at all – meaning that it becomes very difficult for any one developer to justify the expense.

And as much as I try to dissuade people from placing too much pressure on Amiga, Inc., this one is squarely in their court.

It really doesn't matter if they want to put most of their marketing money into the Amiga as a personal computer or the Amiga as a microwave and toaster operating system, to present a current product they will need to get these formats under wraps.

They are the only ones who can sling the sort of authority and money to make the deals happen. But until that happens, hey, at least we got Javascript.

■ **Jason Compton is CU Amiga's US Correspondent.**

Time to break the golden rule

Amiga people don't want all that hassle and expense of upgrading that the PC user has to cope with. Much PC software written today would not run on even a top end machine two years ago.

Sixteen months ago the Cyrix 166 processor was the must have CPU in the PC world. Now it is the lowest possible specification you can still buy. By contrast the Amiga has what? An 0S upgrade to at least 2.0, almost seven years old. Hard drives are now standard. A single generation upgrade from the twenty year old 68000 to the fifteen year old 68020.

A single upgrade of the display system from OCS to AGA. It makes the Amiga much more a computer for the user than the purveyor. It puts quality software in the hands of those who don't want the constant game of keeping up with the Gateses.

Disgusted of Guildford

At CU Amiga we recognise exactly how much our readers appreciate this quality. It has become something of a rule at CU to be very cautious about advice on upgrading. If someone asks what upgrades they need to do so and so, we tell them.

When it comes to blanket recommendations to upgrade, we leave it to the PC mags. It's an unwritten rule, but if we break it, we get letters from Disgusted of Guildford telling us we have no right to tell people what to do.

Disgusted is right.

Unfortunately one of the Amigas great strengths has become its undoing. The Amiga just wasn't as future proof as we thought. When the "base specification" of the Amiga ceased to be high enough for software companies to write the programs they wanted to write on it, they left. When people saw what more powerful rival systems could do, the users left the Amiga too.

Ironically, remaining Amiga users are upgrading like never before to catch up. Despite this, we still refrain from blanket recommendations. We often encourage people to do so, but we try to do it by describing benefits and letting you decide for yourself. We don't want to be accused of pushing people into unnecessary upgrades. Well, I'm going to stick my neck on the line here and jump up and down on the golden rule. It's time to get a CD-ROM drive.

This January, PC Format , the UK's biggest selling home computer magazine, dropped the floppy disk version. The floppy disk version sold a fraction of the CD version, and the expense and trouble of a dual format magazine will be a blessing for them to drop.

Despite frequent requests from readers of the CD edition to go CD only and force everyone to upgrade, we aren't going to go this route for a while yet. If we did, we would significantly increase the efficient running of CU Amiga as a business and the per unit profitability. It would also knock a huge chunk of our sales away overnight and we'd fold.

Disk hassles

Every month, the disk version is more and more of a hassle. It is tricky to find software small enough to fit on floppy disks any more.

Supplies of DD floppy disks are becoming harder to find. Added to all that, the costs of distributing two versions is high. Of course, I'm not trying to argue that everyone should upgrade because doing so will save the filthy rich EMAP media empire a few quid. These problems are mirrored by every other publisher in the Amiga industry.

"Newsflash – most Amiga software produced today is CD-ROM only. The best games, from companies like Titan, Vulcan and Sadeness are on CD-ROM."

"From preliminary results from our survey, what will persuade the hold outs to get a CD-ROM drive are more CD software and lower prices."

▲ **CD-ROM drives... cheap at half the price.**

The reason why it is becoming so hard to find software that fits on disks is that no-one writes it any more. People these days expect more from their computers than is easy to fit on two 880K floppy disks, and that means CD. When Vulcan announced that they were moving to CD only, they took a brave step. They knew it would cost them sales in the short term, but they knew that without it, the Amiga games market was dead.

Feedback

From preliminary results from our survey, what will persuade the hold outs to get a CD-ROM drive are more CD software and lower prices.

Newsflash – most Amiga software produced today is CD-ROM only. The best games, from companies like Titan, Vulcan and Sadeness are on CD-ROM. Most applications are already CD-ROM only. A reluctance to buy until there is plenty of software is fair enough and a universal hurdle for new hardware systems, but it is also a catch 22. Unless enough people own CD-ROM drives, people can't afford to produce it.

If you want what there is on the Amiga, then a CD-ROM drive is a necessity. If insufficient people are convinced to pay back the risk of companies like Vulcan, the market will eventually die. So be it, if the platform cannot persuade its own users of the value of its software any more, then I'm afraid its time has indeed come.

Cheaper than you think

The cost one is harder. Some people simply can't afford a CD-ROM drive. Before you dismiss the expense however, I only ask you think very carefully about it. CD-ROM will give you access to all the modern software.

Magazine cover CDs supply you with vastly more useful, interesting and entertainment software than disks. You will have access to unlimited supplies of clip art, textures, fonts, etc. You may be surprised at how cheap a CD-ROM drive can be. Shop around and you can bodge one up for under £40.

Alternatively a PCMCIA model makes installation easy. Power Computing and Wizard Developments have both been selling such drives for under £80. Still too much? OK, we'll do our best. We'll keep you informed of good deals, and look for all the best and easiest and cheapest ways to help you get that CD-ROM drive.

In short, we'll look into every option we can to get as many of you onto CD as possible, because it benefits the Amiga industry, it benefits us, and most of all it benefits you.

■ **Andrew Korn is Deputy Editor of CU Amiga.**

TECHNO TRAGEDIES Light Guns

We go back to when state-of-the-art video games were made by a firm now more associated with radio-alarm clocks, and the standard colour for your game console hardware was orange...

The graphics were black and white, very chunky and all games were variations on Pong, by law...

Meanwhile, deep in the heart of some high-tech Research and Development facility, scientists were rejoicing because they had just invented the Light Pen. This was a device whose sole purpose was to make your arm sore, as you held it up to the screen to select menu options and play naughts-and-crosses and the like.

Light Pens were actually considered the cheap alternative to mice for a while, and although they made it possible to produce sketches on-screen, they looked destined to an obscure life providing business to surgical support manufacturers. Until, that is, some particularly bright (or lazy) spark tried to use it from the other side of the room.

In one of those Eureka moments, the scientists realised they had a chance to earn some real money for a change, and instantly sold the idea to the video games companies. The games companies loved it of course, and immediately added a new variation to Pong which involved shooting things.

Beam me up?

Despite the illustrations on the boxes, Light Guns were far from the stylised phaser pistols of Star Trek. They didn't shoot out beams of lazer (sic) light.

They didn't shoot anything as a matter of fact: instead the light came to them. The gun was connected to the console via a long cable, and consisted of a long thin tube, with a small light dependent transistor at the end (probably called a "magic eye" at the time).

When pointed at the target, the light travelled down the collimating tube and fell onto the cell. The cell then conducted, like a switch. As the video game hardware knew where the dot was, and also knew when you pressed the trigger, it could work out if you had "hit" the target. Exciting stuff.

Dot-tastic

The first video games to make use of the Light Gun were mind-numbingly simple: a large white dot bounced around the screen, and you had to "shoot" it, by pressing the trigger when the gun was pointed at the dot. We cheated of course, by turning the TV brightness up. Ah, the pointless entertainment of youth...

After the Age of Orange Consoles, along came Atari and Nintendo. Atari used fake teak for their VCS console (a classy piece of kit) but both released their own versions of light artillery. When evolution gave us the Super NES, Nintendo decided to make the pistol into a shoulder launched affair, and used some kind of IR tracking device to locate its position and trigger status.

As you might expect, trying to shoot comic moles as they popped out of holes kept our interest for all of ten minutes.

Fast Forward

Now, jump ahead a few years and you'll find me editing Amiga Computing magazine (oh yes, I had a proper job once you know). Out of one of the jiffy-bags sent to me by games companies (oh yes, games companies wrote software for the Amiga once you know) fell a Light Gun. And what a load of old rubbish it was too.

A horrible, chunky pistol fell out of the bag, along with a floppy disk. Obviously the software house was so pleased about the gun that they had spent about twenty minutes writing the software, because it was dire. I seem to remember trying to shoot pot-plants or something else equally as stupid, whilst the screen flashed when the trigger was pressed down.

Sadly, the gun didn't work and as this was the entire point, the Amiga Light Gun passed quietly away.

Virtually alright

In fact, the only company to get it right were Sega, with their very popular arcade spin-off Virtua Cop. With it's fast 3D graphics, you could stand in the middle of your living room and practice killing people in excruciating detail.

After playing it once, I found I was absolutely delighted that something as immoral as the Light Gun wasn't a big success on the Amiga. It's a sick joke if it doesn't work, and an even sicker joke if it does. ■

John Kennedy

▲ That's the biggest light pen you'll ever see! Emerging from the design labs of Hip Replacements Are Us, the light gun found its way into the world of video games.

6
CREDITS 8
PRESS START

▲ As if to disprove the Techno Tragedy label we've just attached to it, here's the light gun's latest incarnation as a bolt-on extra for Sega's Virtua Cop.

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